

**ENERGY AND ENVIRONMENT CABINET**  
**STRATEGIC PLAN**  
**2014-2018**

**ENERGY AND ENVIRONMENT CABINET STRATEGIC PLAN**

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## ENERGY AND ENVIRONMENT CABINET

### Overview

The Energy and Environment Cabinet was created through an Executive reorganization in June 2008 by Governor Steve Beshear to more efficiently manage Kentucky's energy, natural resources, and environmental programs. The creation of the Energy and Environment Cabinet allows a more efficient and effective use of state resources in critical areas of environmental protection, mine safety, natural resources management, and energy policy development. Under the previous structure, the environmental and natural resources programs were part of a larger cabinet (the Environmental and Public Protection Cabinet) that contained many disparate programs with widely different missions.

The Energy and Environment Cabinet includes three departments: the Department for Environmental Protection; the Department for Natural Resources; and the Department for Energy Development and Independence. The Department for Energy Development, unlike the other two departments, did not exist under the EPPC structure. With the creation of the Department for Energy Development and Independence, the state's energy programs are elevated to cabinet level to help the state achieve its energy development and energy security goals.

The EEC Strategic Plan is organized by department and each section includes a departmental organization chart.

### ***Mission***

Improve the quality of life for all Kentuckians by protecting our land, air, and water resources; utilizing our natural resources in an environmentally conscientious manner; and innovating and creating efficient, sustainable energy solutions and strategies that reduce greenhouse gas emissions and create a base for strong economic growth.

### ***Vision***

To be recognized as a leader among the states for holistically addressing energy, natural resources and environmental challenges.

### ***Core Values & Principles***

- *Integrity:* We believe in adherence to the highest standards of professional conduct.
- *Fairness:* We implement and enforce the cabinet's regulations fairly across all regulated entities.
- *Reliability and Timeliness:* We are committed to responding to all citizens, regulated entities, elected officials, media, federal, state, and local government agencies, and others who depend on answers, permits, etc., in a timely manner.
- *Courtesy:* As primarily a regulatory agency, we take seriously the importance of being courteous in all of our discussions and correspondence with regulated entities.

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- *Cooperation:* We do not act alone in carrying out the cabinet's mission, and our success depends greatly on mutually supportive interactions with our federal counterparts, other agencies in state government, and local governments.
- *Accountability:* We are fully accountable for our actions and decisions that have an impact on citizens and industries.

### ALIGNMENT OF EEC STRATEGIC PLAN WITH THE GOVERNOR'S GOALS

Evident in the EEC strategic plan are efforts or planned efforts to create economic opportunities, create a healthier Kentucky, enhance educational excellence, ensure safe communities, and enhance responsible government. Our regulatory agencies implement and maintain a broad range of environmental standards designed to protect human health and our air, water, and land resources. A healthy environment is integral to a healthy economy and prospects for job creation. The cabinet works in cooperation with local entities to ensure safe communities by establishing programs to reduce the incidence and impact of wild land fires. Our programs also protect coal miners, loggers, agricultural workers and other in their jobs, jobs that often have a higher level risk than many other occupations.

How we develop and utilize our energy resources in the 21<sup>st</sup> Century will be significantly different from what we have done in the past. We must realize that energy prices are increasing and will likely continue to increase at rates faster than the general cost of living. In today's complex and highly industrialized society, reliable, affordable energy is a right for all Kentuckians and is key to growing Kentucky's economy. Creating and supporting energy-related jobs in Kentucky is a high priority within the EEC, and several strategic goals support the Governor's plan for overall 21<sup>st</sup> century job creation.

Toward that end, the cabinet has a number of initiatives that support Governor Steve Beshear's goals to link environmental, natural resources and energy programs in a holistic and cooperative manner. The Cabinet is committed to making sure its regulatory programs remain responsive to the changing requirements of related federal environmental programs while remaining consistent with state regulatory requirements.

DEPARTMENT FOR ENERGY DEVELOPMENT AND INDEPENDENCE

**Overview**

An overarching goal of the Department for Energy Development and Independence (DEDI) energy plan has been to identify and address those actions that can be implemented in sufficient time to help citizens and businesses prepare for the inevitable changes that will occur in the national and global energy landscape in the years ahead. The scientific community worldwide and global consortia are concerned that we must act immediately to reduce the impact of greenhouse gases. Environmental protection includes intelligent use of land as well as nonrenewable and renewable resources. The DEDI plan will help Kentucky ensure the viability of two signature industries – mining and agricultural industries – while addressing the global issue of greenhouse gasses and, at the same time, allowing new vibrant industries that provide high-paying, quality jobs to flourish.

For Kentucky to be a national energy leader, we must fully integrate the development of our energy resources with our mission to protect the environment and strengthen our economy. Therefore, these principles address measures to utilize our fossil resources in a cleaner, more efficient manner, and in a way that will help us assure energy security. In fully utilizing our biomass, solar, wind, hydro and other renewable energy resources, we not only strengthen our energy and economic security – by diversifying our electricity and transportation fuels portfolios – but we also help the commonwealth reduce its carbon dioxide and other greenhouse gas emissions and other pollutants in a significant way. The plan, when fully implemented, will restructure our energy portfolio in such a way that we can use energy in its broadest sense as a tool for economic development, which Kentucky desperately needs.

With this action-oriented energy plan, DEDI will help Kentucky move forward with accomplishing the following by 2025:

- Provide new Kentucky jobs as a result of a diversified energy sector.
- Reduce Kentucky's independence on imported oil.
- Maintain and potentially grow Kentucky's position as a national net energy exporter.
- Reduce Kentucky's greenhouse gas emissions by 17 percent below 2005 levels, while ensuring Kentucky's economic viability.
- Optimize our renewable energy resources, utilizing wind, solar, hydropower, landfill gas, and biomass.

If we succeed, we shall have produced greater economic and energy security for all Kentuckians, while creating significant job growth and economic development in a wide diversity of agricultural, energy, high tech and service companies; a cleaner and healthier environment; a reduction in Kentucky's contribution to global warming; greater energy efficiencies and independence; and a more substantial corporate tax base to support higher quality healthcare, education and transportation for all of us throughout the Commonwealth of Kentucky.

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### **Kentucky's Energy Plan**

The plan proposes a Renewable and Efficiency Portfolio Standard (REPS) whereby 25 percent of Kentucky's energy needs in 2025 will be met by reductions through energy efficiency and conservation and through use of renewable resources. Energy efficiency and renewable energy initiatives are designed to help the commonwealth achieve the REPS. These initiatives allow Kentucky to implement actions to reduce energy use and carbon dioxide emissions in a timely and cost-effective manner. However, even with an aggressive REPS, Kentucky will still need to look at our traditional energy source – coal, with an expanded cleaner product line – and other options such as nuclear.

Our growing reliance on imported oil presents economic and security threats that are untenable. Therefore, the plan also proposes an Alternative Transportation Fuel Standard (ATFS) to help us transition away from dependence on foreign petroleum. Kentucky can displace 60 percent of its reliance on foreign petroleum by utilizing fuels such as those derived from biomass and coal, plug-in hybrid vehicles, and compressed natural gas (CNG), and we can do this by building upon our existing infrastructure.

Elements of the ATFS are captured through plug-in hybrids, biofuels and natural gas. Equally important as weaning the state from imports of foreign oil is developing our natural gas opportunities. These opportunities can be through enhancement of Kentucky's natural gas infrastructure and development of unconventional natural gas drilling techniques.

To achieve our greenhouse gas reduction goals, deployment of carbon dioxide capture and utilization technologies on a large scale is crucial. Initiatives in the energy plan will help Kentucky develop aggressive carbon capture and utilization projects, with a goal that by 2025, 50 percent of Kentucky's coal-based energy facilities will be equipped with carbon management technologies.

A final key component to reducing Kentucky's carbon dioxide emissions is deploying non-carbon dioxide emitting technologies to meet our base load electricity generation needs in the future. One option that must be considered is nuclear power. The energy plan provides an important discussion of the environmental, security and economic issues surrounding nuclear power.

Following is an overview of the initiatives, goals and actions in the energy plan. The plan embraces a Renewable and Efficiency Portfolio Standard to provide 25 percent of Kentucky's energy needs by 2025 through energy efficiency, renewable energy and biofuels and an Alternative Transportation Fuel Standard designed to reduce Kentucky's dependence on imported oil by 60 percent by 2025.

### ***Kentucky's Energy Initiatives***

#### **Improve the Energy Efficiency of Kentucky's Homes, Buildings, Industries, and Transportation Fleet**

Kentucky has been a high user of energy largely because of our historically low electricity rates. We have had little incentive to conserve, and thus we are over-users. This must change. Kentucky can achieve its greatest and most cost-effective reduction in GHG emissions through energy efficiency in all sectors: residential, commercial, industrial and transportation. We can forestall construction of some additional generation facilities through energy efficiency. Therefore, our leading goal, and our utmost advantage in achieving the overall objectives of this plan, is greater energy efficiency.

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**Goal --** *Energy efficiency will offset at least 18 percent of Kentucky's projected 2025 energy demand.*

In Kentucky we are experiencing dramatic increases in costs for our electricity and petroleum. It is likely that the prices for these commodities will continue to increase, and therefore consumers' energy bills will continue to rise. The choice we face is to take no action and see large bill increases with limited economic security, or to take prudent actions now and realize a better chance for smaller price increases as well as increased economic security. In the near term, energy efficiency and conservation represent the fastest, cleanest, most cost-effective, and most secure methods we have to reduce our demand for energy and to help us address issues surrounding global climate change.

### **Actions to Achieve the Goal**

- The Department will encourage an Energy Efficiency Resource goal be set to support the energy efficiency portion of the REPS with a goal of reducing energy consumption by at least 16 percent below projected 2025 energy consumption. To achieve the goal, a combination of both utility-sponsored and non-utility-sponsored energy efficiency programs will need to be developed and implemented.
- The Department will work with other state government entities toward establishment of transportation energy efficiency programs designed to contribute another two percent reduction representing energy savings corresponding to approximately 500 million gallons of motor fuel annually.
- The Department will continue strong education, outreach and marketing programs that will support all energy efficiency activities throughout the state.
- The Department will continue to work with other state government entities to establish an energy efficiency program for state government that has aggressive internal energy savings targets. This program will be important as it establishes a leadership role for state government, and creates many new, well informed energy efficiency advocates for Kentucky.

### **Tactics**

- Provide support and seek funding for the sustainability of the Energy in Education Collaborative, including partners and programs with Kentucky Energy Efficiency Program for Schools (KEEPS), National Energy Education Development (NEED) Project, Green and Healthy Schools program, and the School Energy Managers Program (SEMP).
- Provide support and continue collaborating with the Energy Services Coalition (ESC) to educate local drinking water and wastewater utilities on the benefits of using energy services performance contracting (ESPC) to save energy, costs, and fund facility improvement projects. Promote ESPCs with local cities and counties.
- Provide support to a stakeholder process that seeks consensus on energy efficiency and demand response policies and programs with the goal of enhancing the energy productivity throughout

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Kentucky's economy. Implement the recommendations from the Stimulating Energy Efficiency in Kentucky initiative.

- Provide support and provide representation on the Green Bank of Kentucky Loan Committee and continue to seek funding.
- Provide support for energy outreach and marketing to the Cooperative Extension Service offices statewide, to promote energy efficiency in the Extension offices, homes, and commercial sector of those communities and for energy outreach and exhibit activities.
- Provide support for the Midwest Regional ENERGY STAR annual conference.
- Support administration of State Energy Program grant activities, and work on policy development and energy assurance issues.
- Provide support and seek funding for the Department for Housing, Buildings and Construction (KDHBC) to promote building energy codes and training that save money and help attain the Governor's Assurance of achieving 90% compliance with the recently adopted 2009 International Energy Conservation Code.
- Provide support and seek funding for the Kentucky Housing Corporation to sustain the KY Home Performance program.
- Provide support and seek funding for the Governor's Office of Agricultural Policy to sustain the on-farm energy efficiency and renewable energy partnership.
- Support the State Heating Oil and Propane Price (SHOPP) program to survey winter heating fuel prices in Kentucky.
- Support and seek funding for partners seeking to stimulate the high efficiency, net-zero or Passive House standards.
- Provide support, pursue funding, and provide policy guidance that helps stimulate the electric vehicle and alternative fuel vehicle market in Kentucky.
- Provide support to the Kentucky Department of Education in their implementation KRS 157.455 to build and operate high performance school facilities in Kentucky.
- Support the continued development and expansion of the Commonwealth Energy Management Control System on a statewide basis.
- Provide representation and support to the Finance and Administration Cabinet's High Performance Building Committee.
- Evaluate the economic and technical potential for energy efficiency's role in meeting greenhouse gas limitations.



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### Increase Kentucky's Use of Renewable Energy

Kentucky currently relies on renewable resources for three percent of its electricity generation but could expand its renewable electricity portfolio by relying on resources within the state. In 2010, the commonwealth had the 7th largest hydro power production east of the Mississippi, and has the potential to increase hydro capacity by over 50 percent. In fact, 261 megawatts of new hydro capacity is under development in Kentucky by American Municipal Power. Though most of this generation will be consumed outside of Kentucky it will increase Kentucky's renewable energy generation. One utility is utilizing landfill gas for electricity generation at six landfills across the state. There are several sites in Kentucky being examined by developers of utility-scale wind farms. Another company is working to secure a contract on the power produced from a wood to energy facility. Additionally, solar capacity in the state is expanding due primarily to programs offered by the Tennessee Valley Authority. Kentucky has approximately 9 megawatt of solar capacity in the state including a new 2 megawatt solar array at Fort Knox. The Cabinet is partnering with Fort Campbell and Pennyrile Rural Electric Cooperative Corporation to install a 5 megawatt system on post. Kentucky could essentially tap nearly every renewable resource to produce electricity in an effort to meet its goal. The commonwealth should aggressively pursue its options for renewable generation in order to achieve greenhouse gas reductions and diversify our energy portfolio.

**Goal**--*By 2025, Kentucky's renewable energy generation will triple to provide the equivalent of 1,000 megawatts of clean energy while continuing to produce safe, abundant, and affordable food, feed and fiber.*

Kentucky should pursue those resources that are most cost effective to contribute to a clean and secure energy future. Energy from renewable resources benefits the environment while creating economic opportunities for businesses, industries and rural communities.

To achieve this goal, the commonwealth must aggressively invest in the development of its renewable energy resources.

### Actions to Achieve the Goal

- The Department will support and promote efforts by state government to lead by example by encouraging new or substantially renovated public buildings to use renewable energy as a percentage of total energy consumption. This effort will build over time to reflect the state's renewable energy and energy efficiency goals. The High Performance Building Committee will also be encouraged to establish renewable energy targets for 2015, 2018, and 2025 for new or substantially renovated buildings.
- The Department will recommend to the Cabinet, policies and incentives necessary to achieve the state's renewable energy goal. The analysis will include implementation plans for the REPS for Kentucky's electric utilities.
- As Kentucky's forest resources can potentially contribute more than 50 percent of Kentucky's renewable energy potential, the Department will review existing Cabinet policies and regulations to encourage the responsible, sustainable use of woody biomass within the guidelines of environmental protection.

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### Tactics

- In conjunction with the High Performance Building Advisory Committee promote and establish renewable energy targets for 2014, 2018 and 2025 for new or substantially renovated state buildings. Amend regulations as needed to incorporate these standards.
- Develop best practices for state agencies selling renewable electricity credits.
- Track and report on renewable energy generation in Kentucky.
- Track and report on renewable energy manufacturing in Kentucky.
- Track and report on significant changes at the federal level that could impact Kentucky's renewable energy generation.
- Track and support on significant changes in markets for renewable electricity credits that can affect Kentucky-based renewable generation systems.
- Study and report on the economic and environmental impacts of a renewable energy portfolio in Kentucky.
- Support legislation that removes barriers for those pursuing renewable energy on a voluntary basis.
- Support awareness of renewable energy in Kentucky.
- Identify and provide outreach to electricity customers that could benefit from combined heat and power systems.
- Identify and resolve current regulatory and permitting barriers to generating renewable energy.
- Staff four (4) meetings per year of the CRERES board of directors.
- Coordinate the CRERES annual report to be submitted to the legislature.
- Encourage the responsible and sustainable use of woody biomass.
- Work with the forest industry and other stakeholders to identify opportunities to develop woody biomass and barriers that must be addressed.
- Support legislation that enables the use of power purchase agreements for clean energy.
- Continue to work with counties and municipalities to develop waste to energy projects.
- Identify funding and develop incentives that encourage the growth of renewable energy in Kentucky.

### Sustainably Grow Kentucky's Production of Biofuels

Kentucky currently uses only five to 10 percent of its potential biomass resources for the production of biofuels such as ethanol and biodiesel. Kentucky can significantly grow its agricultural and forestry resources in an environmentally and economically sustainable way to provide more biofuels for transportation, particularly as biofuel technologies expand in the next decade. We can thereby strengthen our energy security while growing and diversifying our agricultural and forestry economies, as well as reducing our GHG emissions. Through a concerted effort and collaboration with agricultural producers, researchers at universities, and policy makers, Kentucky can grow its biofuels industry to meet 20 percent of our current transportation fuel needs.

**Goal**--By 2025, Kentucky will derive from biofuels 12 percent of its motor fuels demand (775 million gallons per year, which represents approximately 20 percent of Kentucky's current transportation fuels demand), while continuing to produce safe, abundant, and affordable food, feed, and fiber.

As part of the ATFS, this initiative focuses on research and development (R&D) as well as deployment of commercial-scale facilities to address technical or infrastructure challenges, thereby enhancing the potential to grow the biofuels market. Kentucky will begin a statewide initiative to ensure that the needed infrastructure, human resources, research and development support, and policies are in place to enable meaningful and sustainable growth in biofuels. Current studies indicate there could be a nearly 10-fold increase in current bio-based fuels in Kentucky.

#### Actions to Achieve the Goal

- The Department will promote Kentucky investment in non-food crops as a feedstock for biodiesel.
- The Department will aggressively seek federal support for and invest in ventures that promote a market for ethanol from non-traditional feedstocks in Kentucky; especially feedstocks that do not negatively affect food prices or availability.
- The Department will encourage that Kentucky establish an escalating renewable fuel standard (RFS) for the state vehicle fleet.
- The Department will draft and encourage that incentives be created to encourage production, distribution, and demand for biofuels in Kentucky in an environmentally sustainable manner.
- The Department will work with both the Cabinet for Economic Development and the Governor's Office of Agricultural Policy to recruit cellulosic biofuel producers to Kentucky.

#### Tactics

- Continue to address actions and recommendations made by the Biomass and Biofuels Task Force.
- Conduct logistics analysis and develop model of infrastructure requirements for a biomass industry.

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- Develop legislative action that supports development of a biomass industry.
- Initiate recruiting efforts to ensure a minimum of 100 MW of biomass-fueled power generation is added to Kentucky's energy portfolio each year from 2015 to 2025.
- Initiate efforts to ensure a minimum of 50 million gallons per year of biofuels production capacity is added to Kentucky's transportation fuels portfolio each year from 2015 to 2025.
- Facilitate field days in partnership with Kentucky universities to showcase emerging technologies and to improve awareness of bioenergy production and utilization opportunities.
- Strengthen collaborations with state and federal agencies, private entities, and academia to enhance policies, technologies, and capital for a more robust biofuels industry.
- Evaluate and foster opportunities to incorporate higher biofuel blends into Kentucky's fuel supply.
- Identify and support biofuels research and development initiatives that lead to commercialization of biofuels in Kentucky.

### **Strengthen Kentucky's Fossil Energy Industry**

Energy independence and economic security are major objectives of Kentucky's energy plan and for the United States. Volatile petroleum prices beyond our control promise to rise again as the economy recovers. The United States imports 60 percent of its petroleum, often from unstable regions of the world. But, Kentucky has abundant coal resources and is the third largest coal producer in the United States. The high emissions of carbon dioxide into the environment must be addressed now, as the United States moves toward federal regulation for coal-fired power generation. Kentucky can diversify ultimate coal utilization, producing cleaner and more efficient energy for state and domestic use. Coal-to-liquid and coal-to-gas technologies can replace petroleum-based liquids and supplement domestic natural gas.

**Goal--** *Kentucky will develop its fossil energy resources to produce cost-effective alternative transportation fuels and synthetic natural gas (SNG) for delivery to the wholesale market by 2025.*

As utilities increase the use of natural gas for electricity generation, in order to comply with federal clean air regulations, both natural gas and electricity prices may increase. To hedge against these price increases we need to develop Kentucky's in-state natural gas production and produce synthetic natural gas derived from coal, both of which help us to achieve our overall objectives of economic security and energy independence. A strong coal-to-gas industry will build upon Kentucky's economic development and increase the number of jobs created by the coal-to-liquids industry.

### **Actions to Achieve the Goal**

- The Department will encourage Kentucky to develop alternative fuel facilities that use fossil energy resources.

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- The Department will encourage expansion of research at the University of Kentucky's Center for Applied Energy Research (CAER) to achieve optimal processes for converting coal to gas under various combinations of coals and operating conditions.
- The Department will recommend that research at CAER should be enhanced to include the life-cycle carbon reduction potential of gasifying biomass with coal in CTG processes.
- The Department will encourage that assessments of new natural gas resources in Kentucky be expanded and accelerated.
- The Department will seek to develop new markets for Kentucky fossil energy resources.

### Tactics

- Promote the use of Kentucky sites previously identified as coal-to-liquids industry locations as having potential for development.
- Continue to market the incentives outlined in the Kentucky Energy Independence Act for the development of alternative fuel facilities.
- Work with Kentucky's Local Government Economic Development Fund-eligible counties to solicit and award grants for research and demonstration projects relating to clean coal and new coal technologies, including synthetic natural gas produced from coal and the development of alternative transportation fuels produced by processes that convert coal or biomass resources.
- Participate in the Coal Utilization Research Council (CURC) and the National Coal Council (NCC), and other avenues, continue to promote national incentives for coal-to-liquid research and demonstration projects.
- Develop programs and award grants for the purpose of public education of coal-related issues (KRS 132.020(5)).
- Continue to identify and encourage new markets for CNG vehicle conversion.
- Identify potential demonstration projects to increase natural gas demand and natural gas to liquid fuels proposals.
- Support legislation that advances conversion of heavy vehicle and off-road diesel engines to run on liquefied or compressed natural gas, and purchase of new on-road or off-road natural gas fueled vehicles.
- Support legislation that advances SNG from CTG in Kentucky.
- Encourage the use of locally produced gas for distributed electricity generation.

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- Evaluate the potential to extend natural gas service to increase demand for Kentucky produced natural gas and to reduce greenhouse gas emissions.

### **Initiate Aggressive Carbon Capture /Utilization/Storage (CCUS) Projects for Coal-Generated Electricity in Kentucky**

More than 90 percent of Kentucky's electricity is derived from coal-fired power, and we rank 13th in total carbon dioxide emissions. Carbon capture, utilization and storage (CCUS) is crucial to continued use of coal as an energy resource in Kentucky. Success of CCUS will determine our ability to meet our future energy needs. Currently, CCUS development emphasizes geologic sequestration. We need more technical options for cost-effective carbon management so that coal can be a cleaner energy resource. Of all the technologies addressed in this plan, CCUS has the greatest technological uncertainty, which is why this initiative emphasizes the need for research, demonstration, and deployment. Beyond geologic sequestration, the federal government has provided little leadership in carbon management. Kentucky must initiate its own solutions to managing carbon dioxide emissions as it diversifies its product line.

**Goal**--By 2025, Kentucky will have evaluated and deployed technologies for carbon management, with use in 50 percent of our coal-based energy applications.

There are unique challenges to be faced in a carbon-constrained world, given Kentucky's reliance on coal-fired power generation. The threats associated with climate change will require Kentucky to make a concerted effort to control emissions of carbon dioxide, one of the greenhouse gases, while at the same time recognizing that coal will continue to be a vital component of our energy mix. We must find ways to reduce carbon dioxide emissions and meet our energy needs for the future.

### **Actions to Achieve the Goal**

- The Department will continue to support the work of the Carbon Management Research Group (CMRG), a consortium of Kentucky's major power companies, the University of Kentucky's Center for Applied Energy Research (CAER), and the Commonwealth of Kentucky's Energy and Environment Cabinet (EEC) should be supported. The CMRG will carry out a ten-year program of research to develop and demonstrate cost-effective and practical technologies for reducing and managing carbon dioxide emissions in existing coal-fired electric power plants.
- The Department will continue to investigate legal hurdles to successful CCUS and recommended legislative solutions provided to the General Assembly.
- The Department will work closely with university researchers and industry partners to undertake one large-scale carbon mitigation projects to capture carbon from flue gases, and then convert system by-products to marketable commodities.
- The Department will work with stakeholders throughout the Commonwealth on research and demonstration projects and initiatives to more efficiently remove and store carbon from existing power plants.

### **Tactics**

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- Support the Carbon Management Research Group, a public private partnership working on research to more efficiently remove carbon from existing power plants.
- Collaborate with the Kentucky Geological Survey to further characterize the geology of Kentucky and its suitability for geologic storage of captured carbon dioxide.
- Increase the Department's capabilities for modeling energy systems including price impacts of various energy and economic scenarios.
- Evaluate the economic and technical feasibility of all low carbon electricity generation options available to Kentucky in light of federal greenhouse gas legislation.
- Continue to support the UK Center for Applied Energy Research (CAER) to develop the hardware and identify algal strains for sequestration of carbon dioxide.
- Support grants and incentives that enable carbon capture and storage technologies research and development in Kentucky.
- Identify barriers and solutions transporting carbon dioxide (CO<sub>2</sub>) by pipeline.

### Examine the Use of Nuclear Power for Electricity Generation in Kentucky

With major increases in efficiency and conservation, aggressively utilizing alternative and biobased energy sources, and more effective use of cleaner coal technologies, we still will not be able to achieve the projected energy demands in 2025 along with meaningful GHG reductions. Thus, other sources of base-load electricity generation will be necessary. Many of our neighboring states are considering nuclear energy. Nuclear power production has no direct carbon dioxide emissions and is already a significant component of the global energy system. Current technologies for nuclear production are superior to the previous generation of plants, complementing an already safe industry in the United States. Improved reliability and efficiency have allowed the industry to maintain its 20 percent share of the growing U.S. electricity market. While the issue of disposal of spent fuel has not been completely resolved, progress will continue to be made to arrive at a solution that addresses the nation's needs.

**Goal--** *Nuclear power will be an important and growing component of the nation's energy mix, and Kentucky must decide whether nuclear power will become a significant part of meeting the state's energy needs by 2025.*

In a carbon constrained world, the interdependencies among energy, the environment and the economy will lead to broad sweeping economic transformations in the 21st century. To find solutions that address climate challenges, use our abundant natural resources to gain energy security, and provide the power needed to drive our economy will require pursuit of a diversified mix of energy options. In weighing the benefits and limitations of potential solutions we must be willing to fully assess and understand the societal, technical, and financial trade-offs involved. Nuclear power is one such option that deserves our full attention, as its technology and safety have significantly improved in the last three decades. It also is likely to become a national priority.

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### Actions to Achieve the Goal

- The Department will examine legal hurdles to successful inclusion of nuclear power in Kentucky's energy mix. Specifically, removal or revision of the legislative ban on new nuclear power plants must be addressed.
- The Department will investigate the need for a public engagement plan to gather and address stakeholder feedback and concerns and to provide education about nuclear power today.
- The Department will investigate the need for additional research to assess the desirability of co-locating nuclear power plants with advanced coal conversion plants to assess the effects on reducing carbon dioxide emissions, providing ready access to electricity and/or steam, and possibly using waste heat for the coal conversion process.
- The Department will investigate and catalogue incentives that reduce the risk of capitalizing and financing a new power plant that should be considered in developing these programs.
- The Department will work with the EEC and the Community and Technical College System to ensure that trained personnel are available to staff the construction and operation of nuclear power plants.

### Tactics

- Facilitate a statewide discussion of the benefits and costs of developing a nuclear generation industry in Kentucky.
- Continue to support and collaborate with the Paducah Uranium Plant Asset Utilization Task Force (PUPAU). This task force is working to ensure that the Assets of the Paducah Gaseous Diffusion Plant campus will continue in productive use after the gaseous diffusion plant ceases operation.
- Further develop and maintain databases of energy production and consumption that is important to Kentucky.
- Produce an annual Kentucky Energy Profile
- Update and maintain the state energy assurance (energy emergency) plan that includes protocols for addressing energy shortages and responses to natural or man-made energy emergencies.
- Continue to participate in the Eastern Interconnection States Planning Council to evaluate the needs for interstate transmission and generation.
- Develop an electricity portfolio model to better understand the impact of changes driven by environmental regulations, policies, or economic conditions on the Commonwealth's electricity portfolio and emissions signature.



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### *Department and Division Functions*

**DEDI - Office of the Commissioner** – Provides administrative, budget, contract, personnel, legislative, communication and technical support to the commissioner.

**Division of Efficiency and Conservation** – The Division’s mission is to provide leadership to maximize the benefits of energy efficiency and conservation through awareness, technology development and partnerships. The Division has oversight in implementing energy efficiency and conservation initiatives.

#### Areas of Focus:

- Oversight for planning, development and implementation of energy efficiency and conservation initiatives for the residential, commercial, industrial and transportation sectors.
- Management of the State Energy Program.
- Oversight for the development of an Energy Efficiency Resources Standard (EERS).
- Oversight for the planning, development and implementation of an energy efficiency and renewable outreach and marketing program.
- Energy Efficiency Program for State Government assistance.
- Oversight for the Renewable and Efficiency Portfolio Standard (REPS).
- Oversight for transportation energy efficiency initiatives that includes advanced electric and hybrid vehicles.

**Division of Renewable Energy** – The Division’s mission is to provide leadership to maximize the benefits of renewable energy through awareness, technology development and partnerships. The Division has oversight in implementing renewable energy initiatives.

#### Areas of Focus:

- Oversight for renewable energy – primarily distributed generation at a scale of 1 MW or less. Larger scale initiatives (>1 MW) will be managed by the Division of Energy Generation, Transmission and Distribution.
- Oversight for the development of a Renewable Portfolio Standard (RPS).
- Oversight for co-products resulting from renewable energy initiatives.
- Oversight for CRERES board

**Division of Biofuels** – The Division’s mission is to provide leadership to grow Kentucky’s biofuels industry through research, development and commercialization while continuing to produce safe, abundant and affordable food, feed and fiber. The Division has oversight in implementing biofuels and biomass energy initiatives.

#### Areas of Focus:

- Oversight for biofuels development and commercialization.
- Oversight for co-products resulting from biofuels energy initiatives.
- Assist in the coordination of the ATFS with Division of Fossil Energy Development.

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- Collaborate with Kentucky's agricultural industry to develop biofuels while continuing to produce safe, abundant and affordable food, feed and fiber.

**Division of Carbon Management and Data Analysis** – The Division's mission is to provide leadership to investigate, develop and promote technical solutions for carbon capture, storage, and reuse and to engage with state, regional and federal agencies in the development of state policy designed to manage greenhouse gas emissions in a carbon constrained environment. The Division has oversight for carbon management initiatives.

### Areas of Focus:

- Conduct economic and modeling analyses on energy and carbon management initiatives.
- Oversight for the development and commercialization of carbon capture and storage technologies (geological, terrestrial and biological) and options for beneficial reuse of carbon emissions.
- Oversight for policy development, coordination and execution of carbon management initiatives, including the working group investigating legal issues surrounding carbon sequestration.
- Energy data collection, analysis and energy model development.

**Division of Energy Generation, Transmission and Distribution** – The Division's mission is to provide leadership to analyze and develop policies that will ensure the generation, transmission and distribution of adequate, affordable and clean energy within the Commonwealth; to understand reliability and economic trade-offs for baseload electricity generation; to develop policies that ensure the adequate transmission of energy resources; to provide energy assurance and energy emergency management planning and to promote alternative and renewable sources for electricity generation. The Division has oversight to implement nuclear power initiatives.

### Areas of Focus:

- Oversight for policy development and coordination of existing and emerging energy generation, transmission, distribution and storage infrastructure resources. (Electric power generation, transmission lines, pipelines and storage)
- Oversight for electricity generation at 1 MW or greater from renewable resources.
- Oversight for pipeline transmission of carbon dioxide with assistance from the Division of Carbon Management.
- Oversight for policy development, coordination and implementation of nuclear energy initiatives.
- Oversight for the development of energy assurance and energy emergency plans in coordination with KY Division of Emergency Management and KY Homeland Security.

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**Division of Fossil Energy Development** – The Division’s mission is to provide leadership to maximize the benefits of Kentucky’s energy resources in a clean and sustainable manner while creating a base for strong economic growth and fostering national energy independence and security. The Division has oversight to implement fossil energy initiatives.

### Areas of Focus:

- Oversight for emerging commercial opportunities in the development of alternative transportation fuels. Managed feed stocks include coal, natural gas, waste, coal bed methane, tar sands and shale oil.
- Oversight for the Alternative Transportation Fuel Standard (ATFS) in coordination with the Division of Biofuels.
- Oversight for co-products resulting from fossil energy development initiatives.
- Oversight for expanding conventional and nonconventional natural gas development and infrastructure.
- Oversight for fossil energy research and development.

### Resources

A complete copy of *Intelligent Energy Choices for Kentucky’s Future, Kentucky’s 7-point Strategy for Energy Independence* can be found at <http://www.energy.ky.gov/NR/rdonlyres/C3E2E625-AF3C-483D-955F-99FF57D74C64/0/FinalEnergyStrategy.pdf>

The Department for Energy Development and Independence Web site can be found at <http://www.energy.ky.gov>.

DEPARTMENT FOR ENVIRONMENTAL PROTECTION

***Goal 1—Clean Air: Protect human health and the environment by achieving and maintaining acceptable air quality.***

Implementing and maintaining programs to achieve federal and state air quality standards in the Commonwealth of Kentucky is important to the health and wellness of all citizens across the state. The amount of air pollution released into the air by industry and transportation sources is monitored using a comprehensive program involving air quality monitoring, planning, construction and operation permitting and inspections.

Kentucky currently operates an air quality monitoring network composed of 143 monitors located in 27 counties. Air monitoring stations are selected using U.S. EPA guidance and are generally established near populous areas or pollutant sources. Station locations are reviewed annually to ensure adequate air quality monitoring coverage. Data from the network is used to demonstrate compliance with ambient air quality standards and identify pollution trends. This information is also used to provide pollutant levels for daily air quality index reporting and detect elevated pollutant levels for activation of emergency control procedures.

Creating effective partnerships with air pollution sources and the public enables the department to carry out its goal of protecting human health and the environment by achieving and maintaining acceptable air quality for all Kentuckians.

**Objective 1 – Ensure programs adhere to federal and state statutory and regulatory requirements.**

**Tactic 1.1:** Attain and maintain the National Ambient Air Quality Standards.

**Measure:** The number of counties currently attaining the 2006 PM<sub>2.5</sub> standard.

**Baseline:** The number of counties originally designated nonattainment for the 2006 PM<sub>2.5</sub> standard based upon the ambient monitoring data.

**Measure:** The number of counties currently attaining the 2008 ozone standard.

**Baseline:** The number of counties originally designated nonattainment for the 2008 ozone standard based upon the ambient monitoring.

**Measure:** The number of counties currently attaining the 2010 SO<sub>2</sub> standard.

**Baseline:** The number of counties originally designated nonattainment for the 2010 SO<sub>2</sub> standard based upon the ambient monitoring data.

**Measure:** The number of counties currently attaining the 2010 NO<sub>2</sub> standard.

**Baseline:** The number of counties originally designated nonattainment for the 2010 NO<sub>2</sub> standard based upon the ambient monitoring data.

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**Measure:** The number of counties currently in attainment of the 2008 lead standard.

**Baseline:** The number of counties originally designated as nonattainment for the 2008 lead standard based on ambient monitoring data.

**Measure:** Improved visibility at Class I areas, including Mammoth Cave National Park, by EPA specified levels at interim deadlines and work toward long-range 2064 background visibility goals.

**Baseline:** 2000-2004 visibility levels.

**Action 1.1.1:** Implement federal and state control strategies for areas of Kentucky that do not meet the 2008 8-hour ozone standard (0.075ppm).

**Action 1.1.2:** Implement federal and state control strategies for areas of Kentucky that do not meet the 1-hour 2010 SO<sub>2</sub> standard (75ppb).

**Action 1.1.3:** Implement federal and state control strategies for 1-hour 2010 NO<sub>2</sub> standard (100ppb).

**Action 1.1.4:** Implement the federal programs and requirements contained in the December 2007 Regional Haze SIP.

**Action 1.1.5:** Develop and finalize re-designation requests.

**Action 1.1.6:** Monitor the infrastructure SIP for the Pb, O<sub>3</sub>, PM, NO<sub>2</sub> and SO<sub>2</sub> standard.

**Action 1.1.7:** Participate in regional modeling initiatives for ozone and visibility control strategies.

**Action 1.1.8:** Conduct education and outreach to those communities expected to be impacted by nonattainment designations.

**Action 1.1.9:** Administer SIP- approved programs implemented as part of historic control strategies.

**Action 1.1.10:** Develop required control strategy SIP as specified by the CAA and EPA guidance.

**Tactic 1.2:** Review and revise state air quality regulations and policies.

**Measure:** The number of regulatory packages developed, promulgated, and finalized in FY14.

**Baseline:** The number of FY13 packages developed, promulgated and finalized.

**Action 1.2.1:** Revise state regulations 401 KAR 51:010, 401 KAR 52:010, 401 KAR 63:002, 401 KAR 63:060, and 401 KAR 52:050.

**Action 1.2.2:** Develop regulation packages that are inclusive of stakeholder concerns.

**Tactic 1.3:** Assess source emissions annually through the Emission Inventory System.

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**Measure:** The number of sources assessed, estimated calendar year emissions, and the amount of emission fees collected during CY 2012.

**Baseline:** The number of sources assessed, estimated calendar year emissions, and the amount of emission fees collected during CY 2011

**Action 1.3.1:** Determine the sources eligible for the emission survey by the first quarter of the calendar year.

**Action 1.3.2:** Assess source emissions by third quarter of the calendar year.

**Action 1.3.3:** Assess emission fees by the fourth quarter of the calendar year.

**Action 1.3.4:** Develop projection of emission fee based on source emission assessments and needs of the division.

**Tactic 1.4:** Ensure air quality programs are fiscally and administratively viable.

**Measure:** The Division staffing levels as compared to cap, budgeted amounts, number of grant programs administered and completed, number of training programs delivered for division staff during FY14.

**Baseline:** Corresponding measures for FY13.

**Action 1.4.1:** Prepare the division budget for the fiscal year.

**Action 1.4.2:** Communicate and coordinate with DEP budget staff on the needs of the Division.

**Action 1.4.3:** Track expenditures and receipts to ensure programs are within designated budgetary amounts.

**Action 1.4.4:** Implement Cabinet and DEP operational, personnel and human resource policies and programs.

**Action 1.4.5:** Monitor staffing levels and ensure timely processing of personnel actions

**Action 1.4.6:** Educate and provide outreach to division staff on Cabinet and DEP policies.

**Action 1.4.7:** Track grants programs and ensure grant programs are meeting expectations.

**Tactic 1.5:** Ensure programs are legally sound.

**Measure:** Number and outcome of air quality litigation cases in FY14.

**Baseline:** Litigation cases in FY 2013

**Action 1.5.1:** Track and advise management of litigation at the federal and state level.

**Action 1.5.2:** Represent and advise the Division on legal matters.

**Action 1.5.3:** Coordinate with permit review staff on the legality of permit language.

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**Action 1.5.4:** Provide informational and technical resources in preparation of litigation.

**Action 1.5.5:** Prepare technical expert witnesses to testify in legal proceedings.

### **Objective 2 – Ensure permits are protective of Kentucky’s air quality.**

**Tactic 2.1:** Issue appropriate, lawful permits in a timely manner.

**Measures:** The total number of permit applications received; the total number of permits issued; the total number of permits pending; the total number of permits pending that exceed regulatory timeframes; the total number of other permit actions (i.e. registrations; off-permit changes; etc.) processed; the number of new permit staff; number of trainings programs provided for permit review staff.

**Baseline:** Average of the five previous state fiscal years.

**Action 2.1.1:** Issue permitting actions that are inclusive of all federal and state requirements

**Action 2.1.2:** Issue permitting actions within the designated regulatory timeframes.

**Action 2.1.3:** Utilize TEMPO to accurately track and report on permitting actions.

**Action 2.1.4:** Evaluate and implement streamlining opportunities to address procedural and institutional inefficiencies.

**Action 2.1.5:** Recruit qualified permitting staff.

**Action 2.1.6:** Provide training to increase knowledge and enhance retention of qualified staff.

**Tactic 2.2:** Conduct air quality modeling to assess source impacts on air quality.

**Measures:** The total number of air toxic assessments and Prevention of Significant Deterioration (PSD) modeling assessments in FY14.

**Baseline:** Modeling assessments in FY13

**Action 2.2.1:** Assess air toxic impacts as it pertains to permit requirements

**Action 2.2.2:** Assess emissions as it relates to prevention of significant deterioration.

**Tactic 2.3:** Provide technical assistance to regulated entities.

**Measures:** The total number of technical assistance activities in FY14.

**Baseline:** Baseline will be established in FY14.

**Action 2.3.1:** Assist Cabinet for Economic Development with projects that impact air quality.

**Objective 3 – Monitor Kentucky’s Air Quality.**

**Tactic 3.1:** Operate a statewide ambient air monitoring network.

**Measures:** The number of air monitors in the network based on population estimates; number of locations selected to represent population exposure; number of locations selected to represent background concentration levels; number of locations selected to represent regional transport of ambient air pollution; number of monitors and locations to represent source impacts; number of hours of continuous ambient air monitoring data collected; number of particulate matter; lead; and air toxics samples collected; concentrations of pollutants for which national ambient air quality standards have been established; and concentrations of pollutants for which health-based risk standards have been determined.

**Baseline:** 2009-2013 Kentucky Electronic Data Acquisition Systems data and 2007-2012 Kentucky Air Quality System (AQS) data.

**Action 3.1.1:** Develop the ambient air monitoring network plan by July 1, 2014.

**Action 3.1.2:** Establish new monitor(s)/site(s) as required by the revised SO<sub>2</sub> and NO<sub>2</sub> NAAQS. These sites should be operational by January 1, 2014.

**Action 3.1.3:** Obtain hourly ambient air pollutant concentrations for ozone, sulfur dioxide, and oxides of nitrogen on a continuous basis using automated analyzers.

**Action 3.1.4:** Obtain hourly ambient air pollutant concentrations for particulate matter 2.5 microns in diameter or smaller (PM<sub>2.5</sub>) on a continuous basis using automated samplers.

**Action 3.1.5:** Collect 24-hour samples for particulate matter (including PM<sub>2.5</sub>, PM<sub>10</sub>, and speciated PM<sub>2.5</sub>), lead, and air toxics per the national USEPA Monitoring Schedule.

**Action 3.1.6:** Minimize data loss by ensuring that failed equipment is repaired or replaced within 5 business days after notification of instrument malfunction.

**Action 3.1.7:** Compile annual mean-concentration reports for each pollutant measured by May 1, 2014.

**Tactic 3.2:** Ensure data accuracy & integrity of the ambient air monitoring network.

**Measures:** The number of complete and current Quality Assurance Project Plans (QAPPs); number of complete and current standard operating procedures (SOPs); percentage of valid; quality-assured continuous ambient air monitoring data collected; percentage of valid; quality-assured particulate matter; lead; and air toxics samples collected; number of



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quality control checks performed on ambient air monitors; and number of ambient air monitoring performance evaluations conducted.

**Baseline:** EPA's 2009-2012 Kentucky Technical Systems Audit Results.

**Action 3.2.1:** Review 100% of Division's air monitoring QAPPs on an annual basis.

**Action 3.2.2:** Review 100% of Division's air monitoring SOPs on an annual basis.

**Action 3.2.3:** Develop SOPs for new methods within 6 months of start-up.

**Action 3.2.4:** Maintain 75% data recovery for each calendar quarter for all instruments within the ambient air monitoring network.

**Action 3.2.5:** Conduct quality control precision checks on each automated analyzer that collects ozone at least once every two weeks, with results within  $\pm 7\%$  difference.

**Action 3.2.6:** Conduct quality control precision checks on each automated analyzer that collects SO<sub>2</sub> and NO<sub>x</sub> data at least once every two weeks, with results within  $\pm 10\%$  difference.

**Action 3.2.7:** Conduct quality control precision checks on each instrument that collects particulate matter samples at least once per month, with results within  $\pm 4\%$  difference.

**Tactic 3.3:** Administer the source sampling program.

**Measures:** The number of source sampling events observed; number of test protocol reviews completed; and number of test report technical reviews completed in CY14.

**Baseline:** Corresponding measures for CY 2013.

**Action 3.3.1:** Review source sampling protocols for adherence to standard test methods.

**Action 3.3.2:** Observe source sampling events to assure compliance with test protocols and permit requirements.

**Action 3.3.3:** Review source sampling test reports for adherence to standard test methods.

**Action 3.3.4:** Track source sampling activities in TEMPO.

**Action 3.3.5:** Provide technical assistance to staff on source sampling methods and activities.

**Tactic 3.4:** Assess statewide source emission impacts in Kentucky and across state boundaries.

**Measures:** The number of analyses conducted in CY14.

**Baseline:** Baseline will be established in CY14.

**Action 3.4.1:** Conduct analysis and research of statewide source emissions, impacts, and trends in Kentucky.

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**Action 3.4.2:** Conduct analysis and research of Kentucky emissions and impacts on interstate air pollution.

**Action 3.4.3:** Provide technical assistance to staff on source emissions, impacts, and trends.

### **Objective 4 – Assure compliance and enforce air quality standards.**

**Tactic 4.1:** Inspect sources of air pollution.

**Measures:** The number of major (Title V) stationary source inspections conducted; number of conditional major (FESOP) inspections conducted; number of High Priority Violations; and compliance rate of stationary source inspections.

**Baseline:** FY 2007-2013 trends data.

**Action 4.1.1:** Complete full compliance evaluations (FCE) at all (100%) Title V major stationary sources on a biennial basis.

**Action 4.1.2:** Complete full compliance evaluations at all (100%) conditional major (FESOP) sources on a biennial basis.

**Action 4.1.3:** Complete review of 100% of annual compliance certifications for Title V major and conditional major (FESOP) sources annually.

**Action 4.1.4:** Review 100% of Field Operations Branch SOPs on an annual basis.

**Tactic 4.2:** Conduct enforcement actions regarding air quality regulations.

**Measures:** Number of days taken to initiate appropriate enforcement action on each High Priority Violation.

**Baseline:** FY 2007-2013 trends data.

**Action 4.2.1:** Initiate appropriate enforcement action on 100% of high priority violations (HPV as defined by EPA) within 60 days of discovery.

**Tactic 4.3:** Respond to air quality complaints.

**Measures:** The number of non-asbestos complaints received; number of non-asbestos complaint investigations conducted; number of open burning complaints (401 KAR 63:005); number of fugitive emission complaints (401 KAR 63:010); and odor complaints (401 KAR 53:010).

**Baseline:** FY 2007-2013 trends data.

**Action 4.3.1:** Complete complaint assessments and /or investigations for 100% of complaints received during fiscal year.

**Tactic 4.4:** Administer the asbestos program.

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**Measures:** The number of Asbestos Certification and Accreditations processed in TEMPO; number of non-complaint asbestos National Emission Standard for Hazardous Air Pollutants (NESHAP) inspections conducted; number of Asbestos Hazard Emergency Response Act (AHERA) inspections conducted; number of asbestos-related complaints received; number of asbestos-related complaint investigations conducted; number of asbestos NESHAP notifications received; and number of asbestos NESHAP notification investigations.

**Baseline:** FY 2007-2013 trends data.

**Action 4.4.1:** Review and issue certification and accreditations within the 30-day regulatory timeframe (RTF)

**Action 4.4.2:** Complete inspection of 75% of NESHAP-regulated asbestos activities within the current fiscal year for which the division has received a required notification.

**Action 4.4.3:** Complete inspection of 20% of selected AHERA local education agencies (i.e. school districts) for the current fiscal year.

**Action 4.4.4:** Complete asbestos complaint assessments and /or investigations for 100% of complaints received during fiscal year.

**Action 4.4.3:** Develop a QAPP for asbestos sampling.

**Action 4.4.4:** Develop a standard operating procedure on AHERA inspections.

**Action 4.4.5:** Develop standard operating procedures (SOP) for asbestos sampling.

**Action 4.4.6:** Develop Asbestos Certification and Accreditations in TEMPO.

### Objective 5 – Participate in programs that improve Kentucky’s air quality.

**Tactic 5.1:** Participate in programs that reduce mobile and off road emissions.

**Measures:** The number of programs administered, partners, and any emission reduction results for FY14.

**Baseline:** Corresponding measures for FY13.

**Action 5.1.1:** Administer the Diesel Emission Reduction Grant Program.

**Action 5.1.2:** Report annual data to the Kentucky Clean Fuels Coalition (KCFC) website for the DEP Green Fleets Program.

**Action 5.1.2:** Partner with the KCFC on initiatives such as promotion of electric vehicles, natural gas and other clean transportation fuels.

**Tactic 5.2:** Partner with other states agencies to reduce air quality emissions.

**Measures:** The number of partnerships and initiatives conducted for FY14.

**Baseline:** The number of partnerships and initiatives conducted for FY13.

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**Action 5.2.1:** Coordinate with DEDI on energy-related research, training, and initiatives such as the Combined Heat and Power project.

**Action 5.2.2:** Coordinate with Finance and Administration Cabinet on Green Fleet efforts.

**Tactic 5.3:** Educate the public on Kentucky air quality issues.

**Measures:** The number of schools visited, students educated, outreach events conducted, and programs initiated and conducted in FY14.

**Baseline:** Corresponding measures for FY13

**Action 5.3.1:** Develop and conduct air quality educational programming for Kentucky's primary and secondary educational institutions.

**Action 5.3.2:** Partner with organizations on environmental education opportunities.

**Action 5.3.3:** Develop educational materials including articles for print, non-print, and social media that educates the public on air quality issues.

**Action 5.3.4:** Maintain and update the Division's website.

**Action 5.3.5:** Coordinate and conduct public events and/or exhibits that educate the public on air quality issues.

**Action 5.3.6:** Monitor and coordinate climate change information as it pertains to the Division programs and air quality education.

**Action 5.3.7:** Monitor environmental justice information as it pertains to Division programs and air quality issues.

**Tactic 5.4:** Foster networking through regional and national partnership.

**Measures:** The number of DAQ staff participating in leadership roles or as committee members in FY14.

**Baseline:** Number of staff in leadership roles or serving as committee members in FY13.

**Action 5.4.1:** Participate in AAPCA, NAACA, ECOS, and SESARM on program and initiatives that affect the Division.

***Goal 2—Clean and Safe Water: To manage, protect, and enhance the quality and quantity of the Commonwealth's water resources for present and future generations through voluntary, regulatory, and educational programs.***

Kentucky has an abundance of water resources that provide important sources for public water systems, recreation and tourism, and economic opportunities. Managing and protecting the state's waters, including lakes, streams and rivers, as well as the water beneath the ground's

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surface, is imperative to ensure safe water for human health, the subsistence of important ecosystems, and the prospect of economic development. The department is responsible for regulating and monitoring the quality of drinking water, surface water and groundwater resources, and wastewater treatment systems across the state of Kentucky.

Effective regulatory oversight of water quality via federal and state regulations along with appropriate water quality criteria controls the amount of pollutants that can be discharged to water sources. Continuous improvement of water quality in Kentucky is achieved through permitting, compliance and inspection, monitoring, and other water quality improvement programs. Inspections of permitted facilities, in conjunction with collection and analysis of data from rivers, streams, lakes and wetlands throughout the state, enable the department to closely monitor the safety of the public's drinking water and the state's water resources.

The department not only protects the public's safety by regulating water quality, but also assists the federal government in the effort to protect Kentuckians from dam failures and flooding. Permits for construction, reconstruction, and repair of dams are issued by the department and regular inspections of dams are also conducted. The National Flood Insurance Program is administered by the department; the department also issues permits for construction on floodplains to prevent losses from flooding in Kentucky.

Through the support of regulatory, monitoring and water quality improvement programs, Kentucky's water resources are enhanced and protected for present and future generations.

### **Objective 1 - Protect, manage and restore water resources.**

**Tactic 1.1:** Develop and Implement Total Maximum Daily loads (TMDLs).

**Measures:**

Number of impaired waters scheduled for TMDL development in FY14.  
Number of impaired waters bypassed for TMDL development in FY14.  
Number of permits that contain TMDL measures in FY14.

**Baselines:**

Number of permits that contain TMDL measures in FY13.  
Number of impaired waters bypassed for TMDL development in FY13.

**Action 1.1.1:** Implement protocols for the translation of TMDLs in permits by December 2013.

**Action 1.1.2:** Develop 50 approved TMDLs by June 2014.

**Action 1.1.3:** Explore alternatives to TMDL development through categories 4B and 5R by December 2013.

**Action 1.1.4:** Pilot a watershed through one of the alternative approaches as determined in Action 1.1.3 by April 2014.

**Action 1.1.5:** Implement requirements of HB378 (Impaired waters transparency)

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**Tactic 1.2:** Implement a Nutrient Reduction Strategy.

**Measure:** Percentage of data collected and analyzed for the development of nutrient criteria in FY13-14.

**Baseline:** The FY13 inventory of existing nutrient criteria data.

**Action 1.2.1:** Continue collection and assessment of data for implementation of narrative water quality standards for nutrients while continuing to evaluate implementation of numeric criteria (nitrogen and phosphorus) for wadeable streams and reservoirs/lakes by June 2014.

**Action 1.2.2:** Finalize KY Nutrient Reduction Strategy by December 2013.

**Action 1.2.3:** Develop a public outreach approach and conduct public outreach regarding nutrients and water quality issues by December 2014.

**Action 1.2.4:** Participate in the Mississippi River/Gulf of Mexico Hypoxia Task Force and work toward implementing the Gulf Hypoxia Action Plan 2008 by June 2014.

**Action 1.2.5:** Participate and provide updates to the Kentucky Agriculture Water Quality Authority throughout the fiscal year.

**Action 1.2.6:** Work with Groundwater Protection Council to develop a nutrient chapter for the Groundwater Report to the Nation by December 2013.

**Action 1.2.7:** Initiate Riparian Buffer promotion by December 2013. Coordinate among multiple programs and agencies.

### Objective 2 – Conduct effective water resources planning

**Tactic 2.1:** Revise and update the Kentucky's Watershed Approach

**Measures:** Completion of the Watershed Framework.  
Number of partners in Center of Excellence.  
Number of Staff trained in Recovery Potential tool.

**Baseline:** 1997 Watershed Framework.

**Action 2.1.1:** Address public comments and finalize the 2013 Nonpoint Source Management Plan by December 2013.

**Action 2.1.2:** Complete draft of Watershed Framework by January 2014.

**Action 2.1.3:** Develop SOPs for assembling GIS watershed profiles for HUC 12 watersheds in Kentucky by September 2013.

**Action 2.1.4:** Prioritize watershed profiles to be developed by September 2013.

**Tactic 2.2:** Promote the EPA's Sustainable Infrastructure Initiative.

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**Measures:** The number of dam safety inspections completed during the year.  
The annual number of boil water advisories.  
The number of sustainable infrastructure outreach activities completed.  
The number of projects approved that incorporated “green” methods or practices such as regionalization, conservation, water and energy expenditure of State-Owned Dam Repair (SODR) funds.

**Baseline:** The corresponding numbers from 2013.

- Action 2.2.1:** Collaborate with key stakeholders from government, industry, and community groups to use their expertise in promoting sustainable water infrastructure.
- Action 2.2.2:** Conduct training and public outreach workshops around the state to explain the initiative to water and wastewater providers; discuss with utilities the available asset management tools; and provide them guidance on how to implement the sustainable infrastructure concepts by June 2014.
- Action 2.2.3:** Make additional revisions to the State Revolving Fund (SRF) project priority ranking systems to award more points to projects that implement sustainable concepts by August 2013.
- Action 2.2.4:** Implement SODR program strategies and projects.
- Action 2.2.5:** Educate local officials, floodplain coordinators, local emergency personnel, and emergency management on how to read inundation maps, and help them to develop Emergency Action Plans.
- Action 2.2.6:** Educate new staff members on the use of new and existing software as well as current laws and regulations.

**Tactic 2.3:** Plan for sustainable infrastructure.

**Measures:** The number of facility plans and asset inventories reviewed and approved.  
The number of dam safety inspections completed during the year.  
The number of environmental information documents reviewed and approved.  
The number of projects approved that incorporated “green” methods or practices such as regionalization, wastewater reuse, as well as water and energy conservation.

**Baseline:** The corresponding numbers from 2013.

- Action 2.3.1:** Participate in the Area Development District Water Management Planning Council meetings to assist with planning future water infrastructure.
- Action 2.3.2:** Develop and implement a strategy to encourage wastewater systems to evaluate the applicability of using onsite and decentralized

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wastewater treatment systems to meet their current and future wastewater needs by June 2014.

**Action 2.3.3:** Develop and implement a strategy to encourage water and wastewater systems to plan on watershed basis to protect water quality and reduce the cost of building infrastructure by June 2014.

**Action 2.3.4:** Continue investigation of innovative uses of the drinking water SRF set-asides that support the sustainable infrastructure initiative.

**Action 2.3.5:** Evaluate and provide recommendations regarding the relationships between floodplain permitting and dam safety.

**Action 2.3.6:** Develop a water audit process for public water systems by June 2014.

**Action 2.3.7:** Complete the required inspections of dams to ensure that dams are properly maintained.

### Objective 3 - Meet federal and state program requirements.

**Tactic 3.1:** Meet Federal grant and work plan requirements.

**Measures:** On-time submittal of all federal grant applications, work plans and reports.

Percentage of 106 work plan inspections conducted.

Submittal of drinking water primacy packages with interim or final primacy granted.

Submittal of required primacy packages.

Number of scheduled sanitary surveys completed within the month assigned.

Implementation of Drinking Water State Revolving Fund (DWSRF) set-asides work plans.

Number of special appropriation projects inspected.

**Baselines:** FFY13 and FFY14 Federal Commitments.

The number of scheduled sanitary surveys completed within the month assigned during FY13.

The number of Special Appropriations (SPAP) inspections completed in 2013.

**Action 3.1.1:** Submit work plans, grant applications, and all reports to EPA and Federal Emergency Management Agency (FEMA) within regulatory timeframes by July 2014.

**Action 3.1.2:** Continue implementation of Performance Partnership Grant (PPG) with EPA.

**Action 3.1.3:** Develop the FFY15 106 work plan commitments by May 2014.

**Action 3.1.4:** Submit the final FFY14 106 work plan inspection commitments by July 15, 2013.



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- Action 3.1.5:** Meet federal work plans, primacy requirements and applicable National Program Measures within associated federal timeframes.
- Action 3.1.6:** Submit DWSRF set-asides work plans to EPA within the timeframe defined in the MOA and track progress made on implementing the work plans.
- Action 3.1.7:** Conduct field inspections of projects that received special appropriation grants in accordance with the federal grant work plans.
- Action 3.1.8:** Conduct field inspections of projects that received financial assistance from the state revolving fund.
- Action 3.1.9:** Conduct PAI on permitted facilities that possess the greatest potential to impact public health.
- Action 3.1.10:** Evaluate and develop a compliance rate improvement plan for inspection activities.
- Action 3.1.11:** Comply with Section 305(b) CWA requirements pertaining to monitoring and assessments and Integrated Reporting.

**Tactic 3.2:** Meet state requirements and maintain progress toward achieving and maintaining zero permit backlogs.

- Measures:**
- The total number of permits pending July 2014.
  - The total number of permits pending that exceed regulatory timeframes by July 2014.
  - The total number of “major” facilities with permit applications that exceed regulatory timeframes by July 2014.
  - The number of general permits that have expired and not been issued or that have not been addressed by July 2014.
  - The number of general permit Notices of Intent (NOIs) for which coverage has not been issued or that have not been addressed by July 2014.
  - The percentage of permit reviews completed within regulatory timeframes during SFY14.
  - The percentage of permit reviews that exceed regulatory timeframes during SFY14.
  - Employee productivity rates for permitting, data entry and scanning during SFY14.
  - The percentage of construction plan approvals issued within the regulatory timeframe for drinking water facilities.
  - The percentage of clean water construction permits issued within the regulatory timeframe.
  - The percentage of dam safety construction permits issued within the regulatory timeframe.
  - Number of coal Individual Permit (IP) and General Permit (GP) coverages issued without objection.

**Baselines:** The corresponding percentages from 2013.

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The SFY13 DOW permit backlog.  
SFY13 backlog percentages.  
SFY13 employee productivity rates.  
Number of coal IP and GP coverages issued without objection on July 1, 2013.

**Action 3.2.1:** Meet regulatory timeframes on permit issuances and plan reviews.

**Action 3.2.2:** Resolve oil and gas program issues.

**Action 3.2.3:** Issue remaining expired general permits by January 2014.

**Action 3.2.4:** Provide outreach to the regulated community regarding implementation of general permits by March 2014.

**Action 3.2.5:** Issue permits for all “major” facilities that exceed the RTF by June 2014.

**Action 3.2.6:** Issue permits for all facilities that exceed the RTF by >1.5 years by September 2013.

**Action 3.2.7:** Resolve coal permitting issues with EPA using available options including: litigation regarding procedures, working with congressional and constituency interests and continued dialog with EPA, as appropriate, to resolve the issues.

**Action 3.2.8:** Meet regulatory time frames pertaining to 401 Water Quality Certifications.

**Tactic 3.3:** Implement a wastewater lab certification program.

**Measure:** The number of wastewater laboratories certified in FY14.

**Baseline:** The number of certified labs on July 1, 2013.

**Action 3.3.1:** Implement a wastewater lab certification program beginning January 2014, provided the regulation has been promulgated through the legislative process.

### Objective 4: Promote better management and communication of data.

**Tactic 4.1:** Implement an integrated data management system for water quality data.

**Measures:** Implementation of Kentucky Water Assessment Data for Environmental Monitoring (K-WADE).

Successful data exchange with EPA via K-WADE.

**Baseline:** Level of completion on July 1, 2013.

**Action 4.1.1:** Submit data to EPA using exchange network by December 2013.

**Action 4.1.2:** Implement K-WADE Production Version with data partner access by January 2014.

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**Tactic 4.2:** Maintenance of Share Point to educate the public and assist regulated entities with compliance with program requirements.

**Measures:** Maintain DOW internet site.  
Implementation of DOW SharePoint/Knowledge Lake Nonpoint Source Program intranet website.

**Baseline:** Level of completion on July 1, 2013.

**Action 4.2.1:** Maintain DOW internet site with modifications made within 24 hours of request.

**Action 4.2.2:** Develop and implement SharePoint/Knowledge Lake intranet site for Nonpoint Source Program by June 2014.

**Tactic 4.3:** Promote better decision making through GIS and Data Analysis.

**Measures:** Number of staff receiving Quality Assurance (QA) training in FY14.  
Number of staff receiving GIS training in FY14.  
Number of Division approved SOPs for FY14.  
Number of data analysis projects completed in FY14.  
Number of GIS requests fulfilled in FY14.

**Baselines:** Number of Division approved SOPs for FY13.  
Number of staff receiving GIS training in FY13.

**Action 4.3.1:** Conduct training for DOW staff regarding QA and the review process by February 2014.

**Action 4.3.2:** Conduct training for DOW staff regarding GIS and ArcGIS 10.

**Action 4.3.3:** Continue systematically analyzing data from current DOW databases.

**Tactic 4.4:** Manage the Safe Drinking Water Information System (SDWIS).

**Measures:** Implementation of eMOR.  
Implementation of web-based data entry process.

**Baseline:** Level of completion on September 1, 2013.

**Action 4.4.1:** Maintain SDWIS until SDWIS Next Gen implementation.

**Action 4.4.2:** Evaluate the various avenues available for the successful development of an eMOR (such as ePortal, WRIS, SDWIS Next Gen, etc.) by June 2014.

**Action 4.4.3:** Convert Oracle forms data entry screens to a net web-based data entry process by June 2014.

**Action 4.4.4:** Participate on SDWIS Next Gen workgroups.

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**Tactic 4.5:** Implement ICIS data flows and data entry via netDMR to improve permit compliance, tracking, and data analysis.

**Measures:** Implementation of permit and compliance data flows into ICIS.  
Implementation of netDMR.

**Baseline:** Status of flowing data to ICIS and entering data into netDMR on July 1, 2013.

**Action 4.5.1:** Flow permit and compliance data from TEMPO into ICIS for the coal industry and single event violations by June 2014.

**Action 4.5.2:** Continue progress toward DMR submitted via netDMR.

**Tactic 4.6:** Improve the utility of TEMPO to provide more accurate facility information data.

**Measure:** Improved accuracy demonstrated by TEMPO audit report in FY14

**Baseline:** TEMPO audit reports generated during FY13.

**Action 4.6.1:** Update work activity logs, requirements library and profiles to be reflective of regulatory changes and current processes.

**Action 4.6.2:** Provide TEMPO training to new staff to ensure they are effectively using all features of TEMPO.

### Objective 5 – Track water-related litigation

**Tactic 5.1:** Direct and participate in any legal challenges to water quality and water resource issues.

**Measures:** Outcome of the litigation.

**Baseline:** All on-going litigation relating to water quality and water resources represented by Environmental Protection Legal Department.

**Action 5.1.1:** Provide informational and technical resources in preparation of litigation.

**Action 5.1.2:** Serve as the technical expert witness at Administrative Hearings.

***Goal 3—Waste Management & Land Restoration: Preserve and restore Kentucky’s land through the development and implementation of fair, equitable and effective waste management programs.***

The Department of Environmental Protection administers an array of programs to minimize contamination risks that may threaten the health, safety and environment of various life forms. These programs regulate and educate the public on issues concerning solid and hazardous waste management, site remediation at contaminated properties, underground storage tanks and recycling waste products.

Solid and hazardous wastes are managed through comprehensive permitting, registration, monitoring, reporting and training requirements. Additional methods such as promotion of solid and hazardous waste minimization, landfill inspections, public meetings and evaluation of waste streams ensure proper protection of our state’s natural resources. The department also utilizes state and federal funds to support various programs, including the Hazardous Waste Management Fund, which is funded through Hazardous Waste Assessment fees. This money is used to address environmental emergencies and to perform assessment and cleanup of abandoned contaminated sites that pose a serious threat to human health and the environment.

Assisting owners and operators with compliance of operational and maintenance requirements for underground storage tanks is a service provided by the department to prevent soil, surface water and ground water contamination. Additionally, the department provides for the abatement and control of contaminant risks associated with releases from underground storage tanks.

The department encourages public participation through various programs to protect our environment by recycling and reducing waste in order to minimize land disposal, conserving energy and natural resources. These programs educate citizens and industry in environmentally friendly practices in the proper management of solid waste and stress the significant environmental and economical benefits of reducing, reusing and recycling materials.

**Objective 1 - Provide efficient program support to DWM branches and stakeholders.**

**Tactic 1.1:** Maintain progress towards reducing and/or maintaining zero permit and data entry backlogs.

**Measures:** Number of hazardous waste permits pending review.  
Number of hazardous waste permits pending review that are outside of regulatory timeframes.

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Percentage of hazardous waste permit reviews completed within regulatory timeframes.

Percentage of hazardous waste permit reviews completed outside of the regulatory timeframe.

Number of solid waste permits pending review.

Number of solid waste permits pending review that are outside of regulatory timeframes.

Percentage of solid waste permit reviews completed within regulatory timeframes.

Percentage of solid waste permit reviews completed outside of the regulatory timeframe.

**Baseline:** The SFY04 DWM permit backlog.

**Action 1.1.1:** Obtain a zero backlog on all remaining applications beyond regulatory time frames by June 30, 2014.

**Action 1.1.2:** Maintain and enhance TEMPO reporting to accurately track and report on measures. Implement TEMPO 360 to improve efficiency.

**Action 1.1.3:** Allocate staff as necessary to assist in permit review.

**Action 1.1.4:** Evaluate and implement additional streamlining opportunities to address process and institutional inefficiencies (example: continuously evaluate business processes to identify inefficiencies and implement effective alternatives).

**Action 1.1.5:** Ensure that all permits are issued within regulatory timeframes.

**Tactic 1.2:** Ensure accurate data entry and reporting, and provide training and guidance to staff and stakeholders.

**Measures:** Number of trainings completed by DWM staff in FY14.  
Number of owners/operators that complete the on-line TOOLS training in FY14.

**Baseline:** The FY13 DWM Pathlore training log.

**Action 1.2.1:** Maintain and enhance TEMPO reporting to accurately track and report on measures. Implement TEMPO 360 to improve efficiency.

**Action 1.2.2:** Allocate staff as necessary to assist with data entry.

**Action 1.2.3:** Enhance training and retention of qualified staff by providing and encouraging staff attendance in cost-effective trainings. (example: In-house CPR trainings and free online webinars).

**Action 1.2.4:** Finalize TOOLS as the program to use for Operator Certification in accordance with the federal Energy Policy Act. TOOLS will implement a site-specific approach to training and testing to support certification which will significantly aid in increased overall compliance and leak prevention.

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**Action 1.2.5:** Review Standard Operating Procedures and guidance documents annually and update as necessary. Update as part of implementation of TEMPO 360.

**Action 1.2.6:** Develop and/or amend regulations for Division programs to accurately reflect programmatic policy and agency requirements (example: drafting regulatory amendments to changes to the annual report and the 5-year plan submitted by counties in accordance with KRS 224.43)

### **Objective 2 - Protect human health and enhance Kentucky's land resources.**

**Tactic 2.1:** Restore or manage contamination at sites with known or suspected releases to soil or groundwater.

**Measures:** The number of sites with known or suspected releases with potential human exposures where no further action is required or otherwise controlled as a result of implementing a management in place technique:  
Number of underground storage tank cleanups conducted that resulted in a no further action being issued and number remaining.  
Number of hazardous waste program corrective actions completed and number remaining.  
Number of historic landfills characterized, number remediated and number remaining.  
Number of illegal open dumps remediated under the Kentucky PRIDE Program and number remaining.  
Number of tire dumps remediated under the Waste Tire Trust Fund and number remaining.  
Number of State Superfund sites characterized and number remediated.  
Number of State-Lead sites remediated utilizing the Hazardous Waste Management Fund.  
Number of sites with a release of petroleum or a petroleum product remediated from a source other than a petroleum storage tank and number awaiting review.  
Number of methamphetamine contaminated properties reported and number decontaminated.  
Number of emergency or incident responses made and number of cases closed.  
Number of cleanups conducted under state oversight via the Voluntary Environmental Remediation Program (see also DCA Brownfields measure).  
Number of brownfield sites assessed under the Targeted Brownfield Assessment Program and number awaiting review.

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Number of brownfield sites reviewed under KRS 224.01-415, number pending review, and number of concurrence letters issued.

**Baseline:** SFY04 inventory of existing sites.

**Action 2.1.1:** Maintain and enhance TEMPO reporting to accurately track and report on measures. Implement TEMPO 360 to improve efficiency.

**Action 2.1.2:** Inventory the list of sites with known or suspected contamination.

**Action 2.1.3:** Identify resource and program constraints hindering achievement of our measures; pursue program changes and request funding as necessary in budget. At a minimum, work to maintain current level of funding in cleanup programs.

**Action 2.1.4:** Prepare draft legislative agenda to address any issues requiring legislative solutions and pursue enactment. (example: Extension of Waste Tire Trust Fund in KRS 224.50-868).

**Action 2.1.5:** Develop and/or amend regulations for Division programs to expedite cleanup progress in a protective manner to human health and the environment (examples: Update HW regulations to incorporate federal rulemaking finalized through July 1, 2011 by early SFY14; Draft regulations to implement KRS 224.01-415; Update 401 KAR 100:030, regional screening levels).

**Tactic 2.2:** Encourage reduced waste generation and disposal by promoting beneficial reuse, recycling, waste minimization, and pollution prevention.

**Measures:** Tonnage of solid and special waste recycled or reused, by type.  
Tonnage of material recycled through the State Government Recycling program.  
Number of waste tires used in tire-derived fuel projects, crumb rubber grants and other beneficial reuse purposes.  
Tonnage of hazardous waste recycled or reused (example: mercury collection efforts).  
Tonnage of waste recycled as a result of recycling grant program.

**Baseline:** SFY04 reported quantities of waste generation, disposal. SFY07 reported quantities for recycling grant program and reuse.

**Action 2.2.1:** Maintain and enhance TEMPO reporting or other databases to accurately track and report on measures. Implement TEMPO 360 to improve efficiency.

**Action 2.2.2:** Identify resource and program constraints hindering achievement of DWM measures; pursue program changes and request funding as necessary in budget.

**Action 2.2.3:** Prepare draft legislative agenda to address any issues requiring legislative solutions and pursue enactment. (example: revision of the statute relating to waste tires).



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**Action 2.2.4:** Develop and/or amend regulations for Division programs to enhance and encourage beneficial reuse and recycling in a protective manner to human health and the environment (example: development of technical requirements for defining when a “recovered material” is exempt from being a solid waste).

**Tactic 2.3:** Assure proper management and disposal of waste.

**Measures:** The compliance rates for authorized solid waste management facilities.  
The amount, by weight, of litter, open dump waste, recycled municipal solid waste and household hazardous waste collected by counties through the Kentucky Pride program.  
The compliance rates for authorized hazardous waste facilities.  
The compliance rates for registered underground storage tanks.

**Baseline:** SFY04 tonnages disposed; litter collected; compliance rates.

**Action 2.3.1:** Maintain and enhance TEMPO reporting to accurately track and report on measures. Implement TEMPO 360 to improve efficiency.

**Action 2.3.2:** Evaluate and implement streamlining opportunities to address process and institutional inefficiencies inhibiting compliance.

**Action 2.3.3:** Develop and/or amend regulations for Division programs to facilitate compliance with agency requirements (example: drafting regulatory amendments to changes to the annual report and the 5-year plan submitted by counties in accordance with KRS 224.43; review 401 KAR Chapter 49 and draft regulatory amendments as necessary)

**Action 2.3.4:** Inspect regulated sites at established intervals to facilitate and ensure compliance with agency requirements.

**Action 2.3.5:** Increase communications between permitting central office staff and field operations staff. Utilize opportunities for central office permitting staff to conduct site visits with field inspectors.

**Action 2.3.6:** Take enforcement action on regulated sites as necessary to facilitate and achieve compliance with agency requirements

**Action 2.3.7:** Finalize TOOLS as the program to use for Operator Certification in accordance with the federal Energy Policy Act. TOOLS will implement a site-specific approach to training and testing to support certification which will significantly aid in increased overall compliance and leak prevention.

**Tactic 2.4:** Plan, design and execute Final Closure Period activities at Maxey Flats while maintaining regulatory compliance.

**Measures:** Complete design package submitted by URS and approved by EPA.  
Documentation of sump abandonment completion.

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Modified contract completed with URS to include sump abandonment oversight and design of the final cap.

**Baseline:** Entry into the Final Closure Period, November 2012.

**Action 2.4.1:** Modify URS contract to include sump abandonment oversight and design of the final cap.

**Action 2.4.2:** Complete the design for the final cap.

**Action 2.4.3:** Complete sump abandonment.

### ***Goal 4—Environmental Compliance: Ensure environmental compliance using a clear and consistent approach of enforcement.***

Proper enforcement stops violators from releasing illegal pollution into the air, water and onto the ground. In situations where federal and state environmental laws have been violated, enforcement ensures responsible parties are held accountable for the contamination of the environment. Responsible parties are directed to clean up contaminated property or reimburse the department for the cleanup.

The Division of Enforcement serves both compliance and enforcement functions. Through its Compliance and Operations Branch, the Division's compliance efforts focus on identifying violations, notifying the regulated entity of the violations and returning the regulated entity back to compliance through informal processes without the assessment of penalties. This is uniquely different from the responsibilities of the Civil Enforcement Branch, which focuses on addressing violations that have already been cited, following formal administrative processes to resolve the violations and routinely assessing civil penalties as a part of the resolution.

The enforcement process is conducted through referrals from either the Department's program divisions or internally from the Compliance and Operations Branch. When regulated entities fail to return to compliance through the compliance process, the referring party prepares, organizes and summarizes case-specific documentation and refers the violation to the Division of Enforcement's Civil Enforcement Branch for formal enforcement action.

### **Objective 1 - Facilitate the return of regulated entities to compliance with environmental statutes and regulations.**

**Tactic 1.1:** Facilitate processes that result in the successful resolution of environmental enforcement cases.

**Measure:** The number of new cases received in the Division during the fiscal year.

**Baseline:** From July 2005 through March 2010, the Division received an average of 34 new cases per month and an average of 408 new cases per fiscal year.

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<b>Measure:</b>	<b>The number of cases closed by the Division during the fiscal year.</b>
<b>Baseline:</b>	<b>From July 2005 through March 2010, the Division closed an average of 37 cases per month and an average of 444 cases per fiscal year.</b>
<b>Measure:</b>	<b>The total number of enforcement cases in the Division.</b>
<b>Baseline:</b>	From July 2005 through March 2010, the Division had an average of 1094 open enforcement cases.
<b>Measure:</b>	The number of cases open in the Division of Enforcement only for monitoring compliance with an Agreed Order or Secretary's Order.
<b>Baseline:</b>	From July 2005 through March 2010, the Division had an average of 265 enforcement cases open for monitoring and executed settlement document (Demand Letter, Agreed Order, Secretary's Order).
<b>Measure:</b>	<b>The number of cases in the Division that are unassigned.</b>
<b>Baseline:</b>	In January 2008, the Division had 120 unassigned enforcement cases. Data developed prior to January 2008 is incomplete.
<b>Measure:</b>	<b>The total amount of civil penalties collected and supplemental environmental projects imposed from enforcement cases during the fiscal year.</b>
<b>Baseline:</b>	From SFY00 through SFY09, the Division collected and average of \$1,973,903.70 in civil penalties per fiscal year.
<b>Measure:</b>	The number of Agreed Orders signed by the responsible party in enforcement cases or cases otherwise resolved.
<b>Baseline:</b>	From July 2005 through March 2010, the Division has received an average of 8 Agreed Orders signed by the responsible party per month and has received an average of 96 Agreed Orders signed by the responsible party per fiscal year.
<b>Measure:</b>	The number of Demand Letters or Settlement Letters issued per fiscal year.
<b>Baseline:</b>	The use of Demand Letters to resolve enforcement cases was reinstituted in February 2008. From February 2008 through March 2010, the Division mailed an average of 5 Demand Letters to the responsible party per month and an estimated average of 96 Demand Letters to the responsible party per fiscal year.
<b>Measure:</b>	<b>The number of agreed orders and Administrative Orders signed by the Secretary in enforcement cases per year.</b>

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**Baseline:** From July 2005 through May 2008, an average of 11 Agreed Orders was executed per month and an average of 132 Agreed Orders was executed per year.

**Action 1.1.1:** Maintain and update protocols and the mechanisms necessary to implement timely and effective enforcement of environmental laws.

**Action 1.1.2:** Develop staff expertise in air, waste management and water programs to allow the Division to more effectively facilitate compliance with environmental laws.

**Action 1.1.3:** Work closely with program divisions to resolve enforcement cases in a timely and effective manner.

**Action 1.1.4:** Develop criteria and format for monthly reporting of Division activities and accomplishments to program divisions and Department and Cabinet management.

**Action 1.1.5:** Develop and implement criteria and mechanism for prioritizing enforcement cases to be referred to Cabinet attorneys for legal action.

**Tactic 1.2:** Resolve enforcement cases in a timely manner.

**Measure:** The length of time required to draft a case resolution proposal for approval once a case has been assigned to staff.

**Baseline:** The average time is 49 days to draft a case resolution proposal once a case has been assigned to staff.

**Measure:** The length of time required to hold a settlement conference after a case resolution proposal has been drafted.

**Baseline:** The average time is 82 days to hold a settlement conference after a case resolution proposal has been drafted.

**Measure:** The length of time required to reach an agreement in principle or refer a case to EPLD after a case resolution proposal has been drafted.

**Baseline:** The average time is 98 days to reach an agreement-in-principle after a case resolution proposal has been drafted, and an average of 167 days to refer a case to EPLD after a case resolution proposal has been drafted.

**Measure:** The length of time required to have the responsible party under an executed settlement document once a case has been assigned to staff.

**Baseline:** The average time is 199 days from case assignment to execution of a DEP agreed order, 143 days from case assignment to mailing of a demand letter, 523 days from case assignment to execution of an EPLD agreed order, and 582 days from case assignment to execution of a Secretary's Order. There is currently insufficient data to determine a baseline for

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length of time from case assignment to execution of a court decision or a consent decree.

**Measure:** The length of time required to draft an agreed order or demand letter once an agreement-in-principle has been reached.

**Baseline:** The average time is 19 days to draft an agreed order once an agreement-in-principle has been reached, and 6 day to draft a demand letter once an agreement-in-principle has been reached.

**Measure:** The length of time required to have the responsible party under an executed settlement document once a case has been assigned to staff.

**Baseline:** The average time is 199 days from case assignment to execution of a DEP agreed order, 143 days from case assignment to mailing of a demand letter, 523 days from case assignment to execution of an EPLD agreed order, and 582 days from case assignment to execution of a Secretary's Order. There is currently insufficient data to determine a baseline for length of time from case assignment to execution of a court decision or a consent decree.

### **Objective 2 – Provide assistance to Department programs by issuing and tracking compliance with letters of warning and notices of violation.**

**Tactic 2.1:** Facilitate processes for the issuance and tracking of compliance with letters of warning and notices of violation.

**Measure:** The number of letters of warning and notices of violation issued by DENF per year.

**Baseline:** From July 2006 through March 2010, the Division issued an average of 5 Letters of Warning per month and an average of 22 Notices of Violation per month. From FY05 through FY08, the Division issued an average of 60 Letters of Warning per fiscal year and an average of 264 Notices of Violation per year.

**Action 2.1.1:** Monitor and report on a yearly basis the number of letters of warning and notices of violation issued by DENF.

**Action 2.1.2:** Work closely with program divisions to issue letters of warning and notices of violation in a timely and effective manner.

***Goal 5—Compliance Assistance and Environmental Stewardship: Promote responsible environmental stewardship.***

The Division of Compliance Assistance administers four programs: certification and licensing, brownfield redevelopment, environmental compliance assistance and environmental leadership (KY EXCEL). The division's innovative and important approach to facilitating compliance and excellence is improving the environment for all Kentuckians.

**Technical Assistance** - *DCA is a technical resource for individuals with environmental questions and needs.* Complying with a very diverse and extensive set of environmental requirements can be difficult. Even committed and experienced environmental professionals face times when they simply need help. DCA maintains a compliance assistance hotline that allows anyone to seek help with an environmental concern.

**Education** - *DCA is providing Kentucky with the knowledge it needs to care for Kentucky's environment.* In a 2008 survey, more than 3,000 entities regulated by the department were asked what impacted their ability to comply with environmental requirements. Respondents identified a lack of knowledge regarding environmental requirements as one of the greatest barriers to ensuring environmental compliance. DCA's training is equipping front-line environmental professionals with the information they need to succeed in their environmental efforts.

**Sustainability** - *DCA strives to help all of its clients recognize and implement sustainable behaviors that protect and improve Kentucky's environment.* DCA stands uniquely positioned to partner with Kentucky's corporate and private citizens to proactively build environmental values and facilitate positive behaviors throughout Kentucky. DCA is accomplishing this through partnerships, training, mentoring and technical support.

**Stewardship** - *DCA strongly believes that the future of Kentucky's environment depends on the stewardship of its citizens.* Every day, people make both large and small decisions in their homes, workplaces and communities that can benefit or harm the environment. DCA is helping these individuals become more aware of the economic and environmental benefits that result from sustainable decisions, so they can make positive choices that are environmentally beneficial.

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### Objective 1 - Certify qualified environmental professionals.

**Tactic 1.1:** Certify select environmental professionals to maximize appropriate actions and effective operations at regulated locations.

**Measure:** The number of certification licenses issued annually.

**Baseline:** In FY09 the Division of Compliance Assistance issued the following certification licenses:

Wastewater Certifications -	180
Wastewater Certification Renewals -	1068
Drinking Water Certifications -	273
Drinking Water Certification Renewals -	273
Solid Waste Certifications	138

**Action 1.1.1:** Process certification applications and administer examinations in an accurate and timely manner to ensure that individuals possess the minimum competencies necessary to properly perform their professional duties.

**Action 1.1.2:** Develop and implement a recruitment strategy that encourages individuals to consider the operator profession.

**Action 1.1.3:** Provide administrative support for the Kentucky Board of Certification of Wastewater System Operators and the Kentucky Board of Certification of Water Treatment and Distribution System Operators.

**Action 1.1.4:** Increase the program's national involvement to stay informed of operator issues, ensure the program is prepared to respond to changing needs, and influence the national policy related to certified operators.

### Objective 2 - Help entities comply with Kentucky's environmental requirements.

**Tactic 2.1:** Provide quality, one-on-one assistance services that help individuals comply with environmental obligations.

**Measure:** Changes in environmental knowledge and behavior resulting from one-on-one assistance activities.

**Baseline:** In FY08, the Division of Compliance Assistance received feedback from its clients that indicated the following changes:

Client Response Activities -	72% indicated a change in knowledge
	83% indicated a behavior change

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**Action 2.1.1:** Implement effective, proactive and reactive multi-media compliance assistance services with a special emphasis on small businesses and communities to enhance environmental performance.

**Action 2.1.2:** Provide ombudsman services for the public and entities regulated by the Department to ensure that department programs are appropriately implemented.

**Action 2.1.3:** Communicate the availability of compliance assistance and the benefits of the program.

**Tactic 2.2:** Implement meaningful programming that provides individuals with the knowledge needed to increase environmental compliance and performance.

**Measure:** Percent satisfaction of those entities trained and audience reached through communication tools

**Baseline:** FY12 indicators are as follows

88.5% Percent satisfaction from training evaluation

1,611 Total number of daily unique visitors on the DCA Website

8,666 Audience reached through DCA communication tools (SNIPS, LAW, and OCP subscribers)

1833 of individuals trained on compliance topics (OCP and ECAP trainings)

**Action 2.2.1:** Produce and facilitate quality training that includes accurate and timely technical and regulatory information.

**Action 2.2.2:** Provide resources that clarify environmental requirements and offer technical solutions to common challenges.

**Action 2.2.3:** Establish communication tools that empower the regulated community to determine the environmental obligations that apply to their location and the resources that are available to make it easier for them to comply.

### Objective 3 – Facilitate Environmental Stewardship

**Tactic 3.1:** Encourage environmental stewardship by making individuals more aware of the opportunities they can act on to make their communities stronger and healthier.

**Measure:** Number of entities assisted with stewardship projects and via training

**Baseline:** FY12 indicators are as follows:

10 entities assisted with stewardship projects

112 individuals trained on stewardship topics (Brownfield and KY EXCEL)



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1,611 Total number of daily unique visitors on the DCA Website  
10,586 Audience reached through DCA communication tools (Green DOT, Facebook, Exhibits, Presentations, and LAW)

**Action 3.1.1:** Provide quality, one-on-one assistance services that help individuals identify, plan, and implement environmental projects that are not required by Kentucky law.

**Action 3.1.2:** Offer quality environmental stewardship training to enable actions that improve Kentucky's environment and create healthier, stronger communities.

**Action 3.1.3:** Develop and compile stewardship resources in partnership with organizations, state and local agencies, nonprofit entities and other stakeholders.

**Action 3.1.4:** Serve as a resource that encourages environmentally sustainable communities and facilitates the cleanup and beneficial reuse of brownfield properties.

**Action 3.1.5:** Establish communication tools that empower the regulated community to determine the stewardship resources that are available to increase their sustainability.

**Tactic 3.2:** Recognize and publicize voluntary actions that improve Kentucky's environment and promote environmental awareness.

**Measure:** The number of voluntary actions identified as a result of DCA programs

**Baseline:** In FY10, the number of voluntary actions observed were as follows:

New KY EXCEL Voluntary Projects -	121
Environmental Stewardship Award Nominations -	44
Eco-Art Submissions -	13

**Action 3.2.1:** Implement KY EXCEL, an environmental leadership program that recognizes entities for their voluntary commitments to improve Kentucky's environment.

**Action 3.2.2:** Administer the Department's environmental stewardship award program.

**Action 3.2.3:** Hold an annual eco-art contest for high school students.

**Action 3.2.4:** Communicate the successes of Kentucky's environmental stewards.

**Tactic 3.3:** Show the division's commitment to environmental stewardship by implementing Lead by Example projects.

**Measure:** The amount of resources utilized by the Division (DCA estimates it consumes 32% of the total building consumption)

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**Baseline:** FY11 resource utilization

91 pounds of aluminum cans recycled  
153,600\_kWh of electricity used annually  
53,024 gallons of water used  
108 MCF of natural gas used

**Action 3.2.1:** Strive for zero waste at division-held training events.

**Action 3.2.2:** Efficiently use natural resources.

**Action 3.2.3:** Recycle within the office.

**Goal 6—Environmental Program Support: *Improve quality, efficiency and effectiveness of environmental programs and activities through innovative strategies, tools and approaches.***

The Department for Environmental Protection involves a range of activities that collectively provide support to ensure decisions made by the department are practical and consistent with the department's mission. These activities provide a foundation to achieve desired environmental benefits in the best interest of Kentucky's citizens.

Assessing the environmental status of Kentucky's air, land and water is important to determine potential threats, evaluate risks and identify solutions to protect the environment and safeguard human health. The department maintains a centralized laboratory that performs analytical sample testing of air, water and soil to determine the nature and extent of pollutants within the Commonwealth. The department also maintains a 24-hour emergency environmental response line for accidental spills and releases of toxic and hazardous material that threaten the environment. The Environmental Response Team (ERT) responds immediately to environmental emergencies and provides efficient, coordinated and effective action to minimize damage to Kentucky's environment.

Administrative support of information technology enables the department to efficiently manage data in a timely manner. Addressing the technological needs of our environmental management systems is an essential aspect of providing web-based electronic services to the public. Advancement of the department's technology and streamlining environmental response programs will provide the best possible service to Kentucky's local governments and communities.

Improvement in organizational and employee development, quality assurance and workplace safety are important areas to facilitate the accomplishment of the agency's mission and goals. Empowering employees with the tools, knowledge and skills to contribute effectively and

efficiently enables employees to achieve long-term sustainable results to protect and enhance Kentucky's environment.

**COMMISSIONER'S OFFICE (CO)**

**Objective 1 – Continue to support and coordinate ongoing department-level programmatic activities.**

**Tactic 1.1:** Identify recommendations that will assist in providing the service and responsiveness required for carrying out the day-to-day activities in the Commissioner's Office.

**Measure:** Provide recommendations to the Commissioner on an ongoing basis.

**Baseline:** SFY10 department-level activities.

**Action 1.1.1:** Coordinate e-clearinghouse and NEPA document reviews.

**Action 1.1.2:** Coordinate U.S. Army Corps of Engineers Public Notice Reviews.

**Action 1.1.3:** Coordinate review of Pollution Control Tax Exemption Certificates.

**Action 1.1.4:** In collaboration with DEPS, coordinate special projects including: Wellness Committee, Governor's Conference on the Environment, KECC, March of Dimes, and other department-wide activities.

**Action 1.1.5:** Conduct an annual review of the department Quality Management Plan and update as necessary.

**Action 1.1.6:** Oversee and maintain the DEP Motor Pool.

**Action 1.1.7:** Coordinate scheduling and oversee all Safety Training for DEP employees.

**Objective 2 – Develop an effective strategic planning process.**

**Tactic 2.1:** Develop a Department for Environmental Protection strategic plan for SFY14.

**Measure:** DEP strategic plan development is coordinated by the Commissioner's Office staff and completed at the beginning of the state fiscal year.

**Baseline:** Strategic plans are finalized in advance of deadlines.

**Action 2.1.1:** SFY14 Strategic Plans for the Commissioner's Office and each of the six department divisions are finalized by July 31, 2013.

**Action 2.1.2:** Ensure the Department's goals and objectives are compatible with the SFY14 Department budget.

**Action 2.1.3:** Align the Department's strategic plan with Cabinet's strategic plan.

**Action 2.1.4:** Publish the mid-year status update to the Strategic Plan in December.

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**Action 2.1.5:** Each division shall publish an annual report by September 15, 2013 including results of the Strategic Plan measures and actions for the previous state fiscal year.

**Tactic 2.2:** Assist staff in understanding their role in the DEP strategic plans by ensuring that employees are clear about the objectives, goals and directions of the agency.

**Tactic 2.3:** Provide input into USEPA's strategic planning processes at both the national and regional levels.

### **DIVISION OF ENVIRONMENTAL PROGRAM SUPPORT (DEPS)**

#### **Objective 1 – Recruit and retain qualified employees for positions at DEP.**

**Tactic 1.1:** Continue ongoing efforts to identify resources that will assist in the hiring and retaining of qualified employees.

**Measure:** The number of new employees hired and retained on a yearly basis in critical positions.

**Baseline:** SFY12 hiring for critical positions.

**Action 1.1.1:** Work with GAPS staff to develop recommendations to present to the Personnel Cabinet to increase employee retention and recruitment (may include promotion in place options and changes to class specifications)

**Action 1.1.2:** Ensure that all divisions within the Department for Environmental Protection have adequate funding budgeted to support the DEP Scholarship Program provided through the University of Kentucky.

#### **Objective 2 – Provide technical, personnel and administrative support for DEP IT-Based Systems (TEMPO/SDWIS/K-WADE).**

**Tactic 2.1:** Produce monthly TEMPO Reports for DEP Commissioner's Office that are timely and accurate.

**Measure:** Monthly submission of reports to the Commissioner's Office.

**Baseline:** Monthly Reports submitted.

**Action 2.1.1** Train appropriate Division staff to produce and format reports.

**Action 2.1.2** Designate and train appropriate Division staff for back up.

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**Action 2.1.3** Hire additional contractors to assist in performing the architecting and programming functions as outlined in existing DEP grants.

**Tactic 2.2:** Provide TEMPO/ SDWIS/K-WADE Database Support.

**Measure:** Successful completion of tasks on IT Project List in FY14.

**Baseline:** July 2013 IT Updated Project List.

**Action 2.2.1:** Completion of requested reporting modules.

**Action 2.2.2:** Provide technical support as the Kentucky Water Assessment Data for Environmental Monitoring (K-WADE) system is developed to replace the Ecological Data Application System (EDAS).

**Action 2.2.3:** Provide timely TEMPO Help Desk Support.

**Action 2.2.4:** Create web-based enhancements for TEMPO, including online permit applications and license/certification renewals in accordance with allocated SFY14 budget.

**Action 2.2.5:** Adhere to Federal Database Guidelines and modifications for the Safe Drinking Water Information System (SDWIS)

**Tactic 2.3:** Meet goals of USEPA grant-based projects on time and on budget.

**Measure:** Successful completion of funded projects in FY14.

**Baseline:** Submission and acceptance of semi-annual and annual reports to and by USEPA.

**Action 2.3.1:** Complete "CROMERR" Exchange Network grant project as noted in project plan.

**Action 2.3.2:** Complete "TEMPO Modernization" Exchange Network grant project as noted in the project plan.

### Objective 3 – Continue to Support and Coordinate Ongoing Programmatic Activities.

**Tactic 3.1:** Identify recommendations that will assist in providing the service and responsiveness required for carrying out the day-to-day activities in the DEPS.

**Measure:** Activities performed and coordinated in SFY14.

**Baseline:** SFY13 activities performed by staff in the DEPS. (IT activities are identified in Objective 2 above.)

**Action 3.1.1:** Coordinate the activities of the Environmental Response Team (ERT) to effectively respond to environmental incidents.

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**Action 3.1.2:** Develop and maintain a Department Continuity of Operations Plan (COOP).

**Action 3.1.3:** Coordinate training for all ERT On-Scene Coordinators

**Action 3.1.4:** Coordinate all DEP facilities issues including maintenance, department services (phone, janitorial, trash, security, internal/external mail delivery, postage for field offices, uniforms, safety shoes, vehicle motor pool and inventory), and office relocations.

**Action 3.1.5:** Coordinate DEP budgetary activities including submission of annual and biennial operating budgets, contractor furlough savings, and fiscal year close-out.

**Action 3.1.6:** Review and develop Memoranda of Agreement (MOAs) and Personal Service Contracts (PSCs) including those for medical monitoring, and OSHA training for all applicable DEP employees.

**Action 3.1.7:** Coordinate personnel activities including the DEP scholarship program, EEO/ADA and Title VI activities.

**Action 3.1.8:** Work with cabinet staff as required to ensure that all IT software licenses are kept current and/or retained under the realm of COT due to the recent reorganization.

**Action 3.1.9:** Provide technical advice concerning appropriate laboratory analytical methods and techniques.

### **Objective 4 – Provide accurate and defensible chemical analytical services to the program divisions of the Department for Environmental Protection.**

**Tactic 4.1:** Analyze environmental samples collected by the Water and Waste Management divisions for chemical constituents.

**Measure:** The number of environmental samples analyzed each year.

**Baseline:** In calendar year 2012, there were 4930 samples analyzed by the Environmental Services laboratory.

**Action 4.1.1:** Provide testing services for samples in accordance with the allocated SFY14 budget.

**Action 4.1.2:** Maintain an average turn-around-time of less than 28 days for samples submitted beyond July 1<sup>st</sup>, 2013. In 2012, the average turn-around-time for all samples was 24.7 days.

**Measure:** The number of individual tests performed by the Environmental Services laboratory.

**Baseline:** In calendar year 2012, there were 40,117 individual tests performed by the Environmental Services laboratory.

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**Action 4.1.3:** Provide individual testing services in accordance with the allocated SFY14 budget.

**Measure:** The number of individual chemical parameters reported by the Environmental Services laboratory.

**Baseline:** In 2012, there were 249,905 individual chemical parameters reported by the Environmental Services laboratory.

**Action 4.1.4:** Provide chemical parameter reporting to meet department needs.

**Tactic 4.2:** Maintain accreditation by USEPA and the National Environmental Laboratory Accreditation Program (NELAP).

**Measure:** Accreditation status of the Environmental Services laboratory.

**Baseline:** Currently, the laboratory is certified as the State Principal Laboratory for Drinking Water by USEPA. In July 2007, the New Hampshire Department of Environmental Services granted the laboratory NELAP accreditation. Continuing accreditation status is dependent on successful ongoing participation in the NELAP program.

**Action 4.2.1:** Participate in a minimum of 2 Proficiency Testing (PT) studies approximately 6 months apart.

**Action 4.2.2:** Pass 2 out of the last 3 consecutive studies to maintain accreditation for various analytical methods.

**Action 4.2.3:** Secure funding that will pay for the fees so that accreditation can be maintained.

**Action 4.2.4:** Review Environmental Services Laboratory analytical and administrative SOPs and Laboratory Operations and Quality Assurance Manual (LOQAM) annually and update as necessary.

**Tactic 4.3:** Upgrade the analytical instrument base of the Environmental Services laboratory.

**Measure:** The analytical capacity and dollar value of new and replacement instrumentation.

**Baseline:** The Environmental Services lab maintains a major analytical instrument inventory with a baseline dollar value in excess of \$2 million.

**Action 4.3.1:** Secure additional funding that will allow replacement of old or outdated equipment and instruments.

**Action 4.3.2:** Secure additional funding that will allow purchase of equipment that utilizes new technologies to meet the department's changing program needs.

**Objective 5 – Provide adequate training to DEP employees.**

**Tactic 5.1:** The goal of the Department for Environmental Protection (DEP) is to provide the best, cost-effective services to the citizens of the Commonwealth. This goal is to be achieved by maintaining a qualified and healthy workforce.

**Measure:** The number of formalized training events sponsored by DEP in FY14.

**Baseline:** The baseline will be the number of training events sponsored by DEP in SFY13.

**Action 5.1.1:** Coordinate the scheduling with USEPA of the Basic Inspector Training Course to ensure that the content is appropriate and current.

**Action 5.1.2:** Offer the DEP New Employee Orientation program on a monthly basis to all new DEP employees and maintain the manual (and PowerPoint presentation) to ensure that the content is appropriate and current.

**Action 5.1.3:** Assist the DEP Commissioner's Office with scheduling and oversight of all Safety Training for DEP employees.

**Action 5.1.4:** Coordinate scheduling of Cabinet (GAPS) mandatory Supervisor's Training program (includes training on employee relations, enforcement of state/cabinet/department-level policies, etc.)

**Action 5.1.5:** Assist the Divisions in identification of specialized training needs and provide approval and support for the training.

**Action 5.1.6:** Coordinate DEP employee participation in the Commonwealth's Wellness Coalition Program, the Humana Vitality Program, and KECC activities.

**Action 5.1.7:** Partner with agencies and organizations outside DEP to provide environmental awareness training (including but not limited to Earth Day, Governor's Conference on the Environment, and Kentucky Recycling Interest Group).



**Office of the Commissioner**

300 Fair Oaks Lane  
Frankfort, KY 40601  
Phone: 502-564-2150  
Fax: 502-564-4245  
[www.dep.ky.gov](http://www.dep.ky.gov)

**Division for Air Quality**

200 Fair Oaks Lane  
Frankfort, KY 40601  
Phone: 502-564-3999  
Fax: 502-564-4666  
[www.air.ky.gov](http://www.air.ky.gov)

**Division of Compliance Assistance**

300 Fair Oaks Lane  
Frankfort, KY 40601  
Phone: 502-564-0323  
Fax: 502-564-9720  
[www.dca.ky.gov](http://www.dca.ky.gov)

**Division of Enforcement**

300 Fair Oaks Lane  
Frankfort, KY 40601  
Phone: 502-564-2150  
Fax: 502-564-9710  
[www.dep-enforcement.ky.gov](http://www.dep-enforcement.ky.gov)

**Division of Environmental Program Support**

300 Fair Oaks Lane  
Frankfort, KY 40601  
Phone: 502-564-2150  
Fax: 502-564-4245  
[www.dep.ky.gov/deps](http://www.dep.ky.gov/deps)

**Environmental Services Branch**

100 Sower Boulevard  
Suite 104  
Frankfort, KY 40601  
Phone: 502-564-6120  
Fax: 502-564-8930  
[www.dep.ky.gov/deps](http://www.dep.ky.gov/deps)

**Division of Waste Management**

## ENERGY AND ENVIRONMENT CABINET STRATEGIC PLAN

200 Fair Oaks Lane  
Frankfort, KY 40601  
Phone: 502-564-6716  
Fax: 502-564-4049  
[www.waste.ky.gov](http://www.waste.ky.gov)

### **Division of Water**

200 Fair Oaks Lane  
Frankfort, KY 40601  
Phone: 502-564-3410  
Fax: 502-564-0111  
[www.water.ky.gov](http://www.water.ky.gov)

DEPARTMENT FOR NATURAL RESOURCES

**DNR GOAL 1. Ensure natural resources development activities such as agriculture, oil and gas drilling, logging and mining are done in an environmentally responsible manner.**

Any activity that disturbs the land surface has the potential to allow increased runoff of sediment-laden water into nearby streams. Many of the regulations enforced by the Department for Natural Resources are designed to stabilize the land surface during natural resources development and keep sediment and contaminants from leaving and causing an off site impact to Kentucky's waterways. Kentucky's natural resources regulations also require mining and drilling operators to take measures that protect groundwater resources. Kentucky's Abandoned Mine Lands (AML) program, which is funded by federal surcharges on coal production, designs and constructs projects to remediate damage caused to land and water by surface and underground mining operations that took place before the protections of the Surface Mining Control and Reclamation Act of 1977 took effect.

DNR takes its responsibility to protect Kentucky's surface and groundwater very seriously. Recent revisions to the Cumulative Hydrologic Impact Analysis (CHIA) process have improved the capability of DNR to identify watersheds where coal mining may significantly impact ground water and surface water resources.

Finally, particularly in this time of reduced resources, it's important to recognize the contribution of citizens to the enforcement efforts of the Department. DNR personnel aren't always present on agricultural, logging, mining and drilling operations, thus, the assistance of local citizens in alerting various DNR agencies to potential problems while they are correctable is invaluable.

**Objective 1 – Ensure that requirements of the Surface Mining Control and Reclamation Act of 1977 (SMCRA) and the Clean Water Act (CWA), as it applies to mining operations, are met for all Kentucky mining operations.**

**Tactic 1.1:** Complete a thorough review of surface mine permit applications within regulatory timeframes. Hire and train additional technical reviewers and engineers to accomplish this tactic.

**Performance measure:** Percent of mine permitting decisions (issued/denied) made within regulatory timeframes.

**Tactic 1.2:** Implement new bonding protocols to comply with the 733 directive.

**Performance measure:** Track mid-term and renewal progress and amount of supplemental bond obtained.

**Tactic 1.3:** Comply with regulatory requirements for inspection frequency of coal mine permits, while also remaining responsive to Citizen's Requests for Inspection.

**Performance measure:** Percent of inspectable units that are inspected in accordance with federal and state frequency requirements; percent of timely responses to

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citizens' requests within state guidelines, while keeping backlog of unresolved citizens' request to a minimum. Goal is to file an initial response to citizens' requests within 5 working days.

**Tactic 1.4:** Maintain sufficient inspector positions in the Division of Mine Reclamation and Enforcement to ensure completion of Tactic 1.3

**Tactic 1.5:** Perform regular updates of watershed GIS datasets (mining history, water quality data, georeferenced permit boundaries) for use in the CHIA of proposed mining operations.

**Tactic 1.6:** DMRE Inspectors assist trend station monitoring. Obtain sufficient funding to continue trend station monitoring in the future.

**Performance measure:** Number of watersheds in which new CHIA protocol can be implemented; number of DMR documents entered into SMIS; number of trend stations monitored by DMRE inspectors.

### Objective 2 – Encourage citizen participation in coal mine permitting and enforcement processes.

**Tactic 2.1:** Make citizens aware of their right to request a permit conference prior to permit issuance and to request inspections of surface mining sites after the permit is issued; provide outreach material for citizens who file Citizen's Request for Inspections (DMP, DMRE).

**Tactic 2.2:** Maintain dialogue with citizens groups and continue to meet with them on areas of concern they may have with DNR regulatory programs.

### Objective 3 – Ensure that commercial timber harvests employ measures to protect water quality.

**Tactic 3.1:** Loggers and operators are required to use appropriate best management practices to protect water quality and to have a master logger on site and in charge of the harvest. The Division of Forestry inspects for compliance.

**Performance measure:** Number of commercial timber harvesting operations inspected; number of harvest sites in compliance; number of operators designated a bad actor.

**Tactic 3.2:** Promote remediation of impacted logging sites and reduction of bad logging practices by allowing loggers deemed as bad actors to be removed from the bad actor list upon remediation of sites, payment of all assessed civil penalties, and demonstrated compliance. Make bad actors aware of the conditions under which they can have their bad-actor designation removed.

**Performance measure:** Percentage of impacted sites and acreage remediated; number of bad actors removed from bad actor list.

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**Objective 4 – Reduce residual impacts from pre-SMCRA mining by using the additional grant funds from 2006 SMCRA Amendments to increase the number of AML reclamation projects, AMD projects, and water supply projects.**

**Tactic 4.1:** Expend additional funds to fund more and/or larger AML reclamation projects.

**Performance measure:** Number of sites and acres reclaimed.

**Tactic 4.2:** Improve water quality in the coalfields by using AMD set aside funds for AMD abatement in affected streams.

**Performance measure:** Length of streams with improved quality.

**Tactic 4.3:** Increase the number of citizens receiving potable drinking water in the coalfields by funding water supply extensions into areas where abandoned mining has affected the groundwater.

**Performance measure:** Number of citizens receiving potable water as a direct result of AML projects.

**Objective 5 - Evaluate the current Division of Oil and Gas regulatory program to ensure it is adequate to prevent waste, is protective of the mineral owners, whose properties are adjacent to active operations, and is stringent enough to protect the environment, while encouraging responsible development and compliant production of crude oil and natural gas resources.**

**Tactic 5.1:** Division of Oil and Gas continues to pursue primacy from USEPA UIC-Class II injection wells for the underground sources of drinking water in the commonwealth. Class II injection wells are primarily installed for enhanced oil recovery and to a lesser extent the disposal of brine (salty) water.

**Performance measure:** Continue to work with USEPA representatives to achieve primacy of the Class II program by the end of fiscal year 2016.

**Tactic 5.2:** DOG increases staffing by 5 positions to provide regulatory enforcement and oversight of Class II-UIC program and to meet current permit review and inspection workloads.

**Performance measure:** Number of permits issued and inspections completed.

**Tactic 5.3:** DOG solicits input from DMRE and produces guidance material, complete with case studies and examples, to educate oil and gas drillers and operators as to the adverse environmental impacts caused by oil and gas drilling activities on surface disturbance permits.

**Performance measure:** Guidance material available on the DOG website.

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**Objective 6 –The Office of Reclamation Guaranty Fund was established by the 2013 General Assembly (House Bill 66) to provide additional revenue to reclaim coal mine permits in the event of bond forfeiture. In addition, the fund will continue to subsidize bonds for permits belonging to members of the former Kentucky Bond Pool.**

**Tactic 6.1:** Complete initial capitalization fee implementation of the Kentucky Reclamation Guaranty Fund (KRGF) by assessing membership and active acre fees to all permittees in the state as of July 1, 2013.

**Performance Measure:** Collection of initial capitalization fees to create additional revenue for the KRGF.

**Tactic 6.2:** Create a system for reporting and collecting tonnage and dormant/non-production fees to maintain the solvency of the KRGF.

**Performance Measure:** Collect tonnage and dormant/non-production fees on a quarterly basis.

**Tactic 6.3:** Continue to provide bond subsidies to the former Kentucky Bond Pool.

**Performance Measure:** Tabulate the number of bonds and bond amounts issued to permits belonging to members of the former Kentucky Bond Pool.

**DNR GOAL 2. Support statewide efforts to develop alternate energy sources and carbon sequestration opportunities.**

Nearly 50% of the future demands for biomass in Kentucky is expected to come from forest resources, but Kentucky's forests are not ready to supply such a demand for woody biomass. The Commonwealth has more than 467,000 private forest landowners, many of whom will require assistance from the Division of Forestry to develop forest management plans that will enable production of woody biomass efficiently and sustainably. Similarly, landowners who choose to grow switchgrass for energy generation will need the assistance and expertise of Division of Conservation and its 121 Conservation Districts to assist with the development of agriculture water quality plans and procurement of funding for best management practices.

**Objective 1 –Enhance Kentucky's forest resources to improve their contributions to the environment and economy through management and reforestation activities.**

**Performance measure:** Maintain a positive growth-to-removal ratio, while utilizing available forest resources for environmental, economic, and social benefits for all Kentuckians.

**Tactic 1.1:** Promote logging, biomass removal, and forest management practices that enhance the value and provide for the sustainability of Kentucky's forest resources and protect the waters of the Commonwealth.

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**Performance measure:** Increase the quality of Kentucky's forests based on distribution of tree grades as indicated in Kentucky's Forest Inventory and Analysis data.

**Tactic 1.2:** Provide technical and financial assistance to the forest products industry and private forest landowners, who provide sustainable renewable resources for energy production from woody biomass; obtain funding for additional division staff to provide this assistance.

**Tactic 1.3:** With the assistance of the Economic Development Cabinet, promote the value and opportunities of Kentucky's forest resources to interested industries, within and outside of Kentucky.

**Performance measure:** Maintain a positive growth-to-removal ratio while utilizing available forest resources for environmental, economic, and social benefits for all Kentuckians.

**Tactic 1.4:** Cooperate with the Department for Energy Development and Independence to develop a sustainable strategy for including woody biomass in the state's renewable energy needs.

**Tactic 1.5:** Maintain the Division of Forestry Tree Nursery capacity to produce and distribute 2 to 3 million tree seedlings annually for reforestation and mine reclamation.

**Tactic 1.6:** In coordination with The American Chestnut Foundation and its Kentucky Chapter, identify and propagate blight resistant American chestnut seedlings for planting on surface mine reclamation sites.

**Performance measure:** Number of blight resistant American chestnut seedlings planted on surface mine reclamation sites annually.

**Objective 2 – Promote reforestation (according to the Forestry Reclamation Approach) and wildlife habitat enhancement as the preferred choice for post-mining land uses to provide for enhanced wildlife habitat, recreational opportunities, high-value hardwoods for timber production, improved hydrologic conditions, and sequestration of carbon as a means to control greenhouse gas accumulation.**

**Tactic 2.1:** Encourage permit applicants during initial permit walks on potential surface mine sites to establish forestland as the approved post mining land plan using the Forestry Reclamation Approach; permit applicants should be encouraged to seek the favorable approval of the landowner for this use.

**Performance Measure:** Acres and percentage of reclamation plans that include ARRI reforestation as post-mining land use.

**Tactic 2.2:** Encourage the Forestry Reclamation Approach on Abandoned Mine Land (AML) Projects and seek the favorable approval of the landowner for this use.

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**Performance Measure:** Acres of ARRI reforestation included on AML projects.

**Tactic 2.3:** Facilitate the approval and installation of carbon sequestration demonstration projects based on the Forest Reclamation Approach.

### **Objective 3 – Support the use of Agriculture Water Quality Act plans and practices in the development and production of biofeedstocks for energy production.**

**Tactic 3.1:** The Division of Conservation serves as a resource for producers to develop and implement individual water quality plans, conservation plans, compliance plans, nutrient management plans, forest management plans and other measures on their farms which comply with the Agriculture Water Quality Act, without creating a financial hardship or a decrease in productivity.

**Performance measure:** Increase by 5 % the annual number of acres that has some applied conservation practices from the FY 2009 baseline of 438,059.

**Tactic 3.2:** Evaluate the effectiveness of BMPs, and in conjunction with the Division of Water, develop regional or priority protection areas in regions with documented water quality problems.

### **Objective 4 - Increase the adoption of agricultural best management practices for proper conservation and wise use of Kentucky's soil, water and other natural resources.**

**Tactic 4.1:** Support the efforts of the 121 local conservation districts to effectively deliver technical assistance and funding to support conservation practices in all Kentucky counties, with emphasis on those counties where NRCS and the Farm Service Agency no longer maintain offices.

**Tactic 4.2:** Develop and implement a web-based application process for the Kentucky Soil Erosion and Water Quality Cost Share Program that will provide cost share assistance to landowners that can be used for the installation and maintenance of agricultural best management practices.

**Performance measure:** Number of applicants for KY Soil Erosion and Water Quality Cost Share Program funds who apply online and the number of web-based applications received. Number of environmental grants provided to conservation districts.

**Tactic 4.3:** Educate conservation districts, farmers, landowners and contractors as to the availability of the low-interest loans that can be used purchase heavy or specialized conservation equipment for the installation of conservation or best management practices.

**Performance measure:** Number and amount of new equipment loans made annually.

**Tactic 4.4:** Support and assist conservation districts to in implementing additional local, state and federal programs such as, the Tobacco Settlement Agreement Phase I Model



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Programs, and the Landowner Incentive Program, among others, that help farmers and landowners address resource concerns.

**Performance measure:** Amount of assistance funding obtained by landowners through these programs.

**Tactic 4.5:** Support the Forestry Best Management Practices Board, which also serves as the Silviculture Committee of the Agriculture Water Quality Authority, to review and revise silviculture best management practices.

**Performance measure:** Amount of assistance funding obtained by landowners through these programs.

### **DNR GOAL 3. Ensure the natural resources of Kentucky are protected, managed and enhanced to provide maximum benefits to the people and economy of Kentucky.**

The Division of Forestry, the Division of Conservation and the Kentucky Heritage Land Conservation Fund are the three agencies in DNR charged with engaging Kentucky's public and private landowners in activities that protect, manage and enhance land, water and wildlife resources. Kentucky's 11.9 million acres of forestland and 85,300 farms provide multiple benefits to the economy and environment of Kentucky. Forests provide direct economic benefit through the harvest of wood and forest products. Over \$9 billion in revenue is contributed to the State's economy annually from the primary and secondary wood industries; agricultural income is \$5.9 billion per year. Forests improve water quality and aquatic habitat, enhance aesthetic appeal (tourism), provide wildlife habitat, increase recreational activities, and help control greenhouse gas emissions by sequestering carbon. The continued value of Kentucky's renewable forest resource depends on sustainable management practices and protection from threats to forest health. Sustainable management includes human activities such as competent forest stewardship, responsible logging practices, and proper reforestation. The threats to forest health come from human activities such as unplanned development (deforestation) and human-caused wildfires (primarily arson), and from environmental threats such as insect pests (gypsy moths, hemlock woolly adelgid, emerald ash borer) and diseases (sudden oak death, dogwood anthracnose).

#### **Objective 1 – Establish programs and partnerships to reduce the incidence and impact of wildland fires in Kentucky**

**Performance measure:** By June 30, 2014, decrease the number of Kentucky's acres burned from forest fires by 20% from the 2010 ten-year average.

**Tactic 1.1:** Establish a media campaign as recommended by the Wildland Arson Task Force.

**Tactic 1.2:** Promote the Firewise Program through the Division of Forestry to make communities at the wildland interface more resistant to fire damage and reduce the financial and resource burden of fire on individuals and local fire departments through preparation and planning.

**Performance measure:** Number of Firewise communities in Kentucky.

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### **Objective 2 – Protect Kentucky’s forest resources from environmental threats such as fires, pests and diseases.**

- Tactic 2.1:** Obtain funding to replace and upgrade firefighting equipment to allow efficient firefighting. Program budget increases to acquire needed equipment in line with replacement schedule.
- Tactic 2.2:** Monitor and respond to threats to the health of Kentucky’s forests.
- Tactic 2.3:** Increase public awareness of threats to Kentucky’s forest health such as gypsy moths, hemlock woolly adelgid and emerald ash borer through educational outreach programs and web-based information.

### **Objective 3 – Protect prime farmland for agricultural production.**

- Tactic 3.1:** Offer opportunities for farmers and landowners to protect prime farmland for agriculture production through the Agricultural District Program, the Purchase of Agricultural Conservation Easement (PACE), program, the Purchase of Development Rights (PDRs) program or other related farmland protection programs.

**Performance measure:** On a yearly basis the increase in the number of acres protected by farmland protection programs.

### **Objective 4 – Promote the establishment of new wetland areas as a part of natural resources development activities under the guidance of the Wetlands Working Group.**

- Tactic 4.1:** Increase wetland development by identifying departmental programs that can develop wetlands projects and allocate the necessary resources.
- Tactic 4.2:** Support the development of the Center for Wetlands and Stream Restoration sponsored by the U.S. Forest Service.

### **Objective 5 – Promote stewardship of Kentucky’s natural resources.**

- Tactic 5.1:** Increase by 10% over the next five years, using a 2008 baseline, landowner participation in forest stewardship activities of publicly owned and privately owned forestlands
- Tactic 5.2:** Obtain annual funding of \$500,000 for the Kentucky Forest Conservation Act’s Stewardship Incentives Fund which can be used as cost-share for forest landowners when implementing silvicultural practices.
- Tactic 5.3:** Division of Conservation promotes improved public awareness of DNR’s role in the stewardship of Kentucky’s natural resources and environment through educational and public outreach efforts, such as Earth Day, the Essay and Writing Contest, Envirothon, district newsletters, tree give-away programs, and the Division’s Web site.

**Performance measures:** Number of teams participating in the Envirothon. Number of students participating in the Essay and Writing contest.

**Objective 6 – Kentucky Heritage Land Conservation Fund (KHLCF) will continue to promote the conservation and management of ecologically significant lands throughout the Commonwealth.**

**Tactic 6.1:** Award funding for the purchase and preservation of selected natural areas which will protect rare and endangered species and migratory birds, save threatened areas of natural importance; and provide natural areas for public use, outdoor recreation, and education.

**Tactic 6.2:** Encourage partnerships of state and local agencies in the protection of natural lands.

**Performance measure:** On a yearly basis, increase in acreage protected by KHLCF conservation easements or deed restrictions.

**Tactic 6.3:** Enhance the land stewardship of KHLCF funded properties by conducting stewardship workshops for partners which have purchased natural lands with KHLCF funding.

**Tactic 6.4:** Engage in a broad-range of public education and communications activities designed to build support for the KHLCF program.

**DNR GOAL 4. Ensure coal mining, logging, firefighting and agricultural activities are performed in a safe manner.**

DNR's responsibility extends beyond production and protection of natural resources to the safety of the employees performing those tasks. Coal miners, loggers, firefighters and agricultural workers are at greater risk of death or injury than many workers, and lack of training or poor work habits of some employees may put others (including private citizens) at risk as well. DNR agencies work to reduce the risk to natural resources workers and to other citizens during natural resources activities.

The Office of Mine Safety and Licensing provides training for miners, certifies miners, inspects surface and underground mines for compliance with health and safety regulations, corrects unsafe acts, investigates accidents, responds to mine emergencies, and requires drug testing of miners and sanctions individuals and companies for violating mine safety regulations.

DNR regulates coal and non-coal blasters and blasting operations via the Explosives and Blasting Branch of the Division of Mine Reclamation and Enforcement (DMRE). Of great concern to the regulatory agencies are any operations that are blasting near occupied dwellings or other improvements. With such operations, there is always the possibility of a flyrock event occurring, during which rock and debris are thrown from the mine or construction site causing damage to roads, private property, or in rare cases injury or death to people. DMRE continuously explores practices and penalties that reduce the number of flyrock incidents.

**Objective 1 – Prevent Flyrock Incidents Related to Coal and Non-Coal Mining (DMRE)**

**Tactic 1.1:** Identify mine sites at high risk for flyrock events; investigate the actual blasting site and evaluate the geology of the area, including the steepness of slopes and prior to the commencement of blasting operations, review the plans for the drilling operations, loading processes and operational timelines.

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**Performance measure:** While there were 6 flyrock events at coal sites and 2 flyrock events at non-coal sites in Kentucky in fiscal year 2013, the goal continues to be having zero flyrock events.

**Tactic 1.2:** Provide the on-site blasting operation personnel with information about any problematic conditions that are identified and educate them as to measures that have prevented blasting problems previously in similar conditions; encourage blasting personnel to develop a flyrock prevention plan.

**Performance measure:** Increase the number of pre-blasting briefings of on-site personnel on all blasting operations. Participate in all meetings entailing the implementation of a Blasting Remediation Plan.

**Tactic 1.3:** Continue to develop in coordination with OSM, coal industry associations, and other agencies, training courses and procedures addressing the specific needs of licensed blasters relative to the unique areas for their blasting operations.

**Tactic 1.4:** Continue to implement the DNR's Approved Training Plan and incorporate into blaster training courses suggested training topics.

**Tactic 1.5:** Continue to require training classes be evaluated by students taking the course or participating in a required training test.

**Tactic 1.6:** EBB continues their coordination with the University of Kentucky, Department of Mining Engineering in a joint effort to produce a study of flyrock events in Kentucky. The study will review and analyze data from many different perspectives and look for trends to identify common and contributing causes of flyrock incidents.

### **Objective 2 – DNR Divisions will provide training to increase workplace safety and reduce worker accidents and injuries.**

**Tactic 2.1:** Division of Conservation provides workplace safety and training to division staff and conservation district employees.

**Tactic 2.2:** Division of Forestry provides employee firefighter training with increased emphasis on safety.

**Tactic 2.3:** Division of Forestry provides a safety briefing prior to each deployment for wildfire suppression.

**Tactic 2.4:** Division of Safety Analysis, Training and Certification uses Safety Analysts to identify and correct unsafe acts by miners working in underground and surface mines.

**Performance measure:** Number of unsafe acts observed and corrected.

**Tactic 2.5:** Explosives and Blasting Branch resumes Safety / First Aid training session for all blasters.

**Objective 3 - Reduce Serious Mine Accidents and Fatalities. (OSML)**

**Tactic 3.1:** Complete all required annual underground mine, surface mine and electrical inspections according to Kentucky requirements.

**Tactic 3.2:** Continue to identify safety hazards and unsafe behaviors that numerically are the highest contributors to accidents, injuries and fatalities in Kentucky coal mines.

**Performance Measure:** Ascertain whether the current ten-year average of reportable mine accidents and fatalities is declining to levels less than the previous 10-year average.

**Tactic 3.3:** Develop targeted safety training for mine foremen and miners helping them avoid unsafe conditions and behaviors.

**Tactic 3.4:** Propose regulatory or statutory changes as necessary to address emerging mine safety issues.

**Tactic 3.5:** Continue to support the Mine Mapping Initiative allowing citizens, drillers and miners to identify the extent of previous mining in all parts of Kentucky's coal fields, thereby avoiding hazards created by proximity of the previous mining.

**Performance measure:** Annual increase in number of mine maps made available to the public through the Mine Mapping site.

**Tactic 3.6:** Meet with officials responsible for miner safety in adjacent states to explore the possibility of reciprocity for miner certification and suspension or revocation of certifications due to safety violations.

**Tactic 3.7:** Provide professional accident investigation for all mine accidents that timely and accurately determines the cause(s) of the accident and use this information to prevent future occurrences.

**Objective 4 – Upon request of any Kentucky underground coal mine licensee, provide MSHA-mandated mine rescue team coverage that complies with the increased training and contest participation requirements of the federal MINER Act.**

**Tactic 4.1:** Maintain OMSL staff by hiring, equipping and training MSHA mandated mine rescue teams in order to provide adequate coverage for all Kentucky underground mines.

**Performance measure:** All licensed Kentucky mines are provided MSHA signature mine rescue team coverage by OMSL.

**Tactic 4.2:** Use scheduled overtime to allow existing OMSL staff to meet state regulatory inspection requirements and MSHA mine rescue team requirements until new inspectors can be hired and trained.

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### **Objective 5 – Assist Water Conservancy Districts to address the continuing issue of Conservancy District dams that need maintenance, breach analysis, or emergency action plans.**

**Tactic 5.1:** In coordination with the Natural Resources Conservation Service (NRCS) identify funds so as upgrade all dams classified as high priority.

**Tactic 5.2:** Promote using funds from the Division of Conservation's Equipment and Infrastructure Loan program as a state match for available federal funds that can be used for this Objective.

### **DNR GOAL 5. DNR regulatory programs must remain responsive to the changing requirements of related Federal environmental programs, while remaining consistent with state regulatory requirements.**

The current federal administration has initiated an enhanced coordination among state and federal agencies with respect to the implementation of Clean Water Act requirements pertaining to coal mining operations. With USEPA currently increasing its role in the review of CWA Section 404 and 402 (KPDES) permits, state agencies must identify and implement procedures that will allow a more effective coordination among all affected agencies during the permitting process of surface mines.

The Division of Oil and Gas is making changes to Class II primacy package as directed by technical staff from USEPA and will continue to work with USEPA representatives on its application to obtain primacy from the USEPA. The Division is re-evaluating the oil and gas regulatory program to ensure that it is sufficient to address the increased use of horizontal and directional drilling technology. The Division is also in the process of evaluating the feasibility of a performance bond for oil and gas storage facilities.

### **Objective 1 - Improve the efficiency of regulatory processes and programs through elimination of regulatory overlaps, duplication, inefficiencies and inconsistencies between DNR and other state or federal agencies.**

**Tactic 1.1:** Improve coordination and increase the efficiency between DNR, DEP and relevant federal agencies, such as US Army Corps of Engineers, U.S. EPA and Office of Surface Mining Reclamation and Enforcement, in regulating coal mining activities.

**Tactic 1.2:** Continue to meet and participate in Office of Surface Mining quarterly inter-agency meetings.

**Performance Measure:** DNR participates each quarter in scheduled OSM interagency meetings.

**Tactic 1.3:** Continue the internal review begun in the previous FY of all departmental regulations and repeal duplicative or outdated regulations.

### **Objective 2 - Evaluate current Oil and Gas regulatory programs and requirements to determine if changes are needed to address changing conditions or responsibilities.**

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**Tactic 2.1:** Division of Oil and Gas finishes review of the current reclamation requirements for oil and gas production and storage facilities and implements a program to address deficiencies.

**Tactic 2.2:** Assess the need for updating and revising Oil and Gas regulations governing horizontal and deviated oil and gas wells.

### **Objective 3 – Maintain and improve communications with other state and federal agencies.**

**Tactic 3.1:** DMRE coordinates with blasting personnel within OSM and other agencies as to blasting issues, blasting assistance, joint inspections and blasting summits in order to raise the standards of practice for blasting in Kentucky.

**Tactic 3.2:** The DMP and DMRE continue to communicate and coordinate with the DEP Divisions of Water and Enforcement through the Coal Water Quality Task Force concerning water quality permitting and enforcement issues related to coal mining.

**Performance Measure:** Coal Water Quality Task Force meets monthly to exchange information and resolve water quality concerns. Develop and implement computer system upgrades to improve the efficiency of transferring KPDES permitting and water monitoring data to online sites. Continue to foster effective collaboration with DEP's Divisions of Water and Enforcement as to water related issues such as Performance Audit Inspections, responses to Notices of Intent (to sue), and enforcement of DMR reporting.

**Tactic 3.3:** Communicate with industry and environmental groups on a regular basis to promote mutually agreeable resolution to regulatory issues.

### **DNR GOAL 6. DNR's human, physical, and fiscal resources are efficiently and effectively managed to maintain a high level of service to the citizens of Kentucky in all DNR program areas.**

Recent funding reductions have taken a heavy toll on the level of experience and number of staff positions and the resources available to do the work of DNR divisions. DNR has identified and implemented efficiency measures in all of its divisions to reduce the resources needed to maintain programs, without reducing the level of service to the citizens of Kentucky. Effective training of all DNR's personnel is an essential part of ensuring consistency of regulatory enforcement and raising the competency of the regulatory program staff.

The most recent reductions in personnel and operations occurred within the Division of Forestry. The reduction resulted in the closure of four field offices and field operations combined into five regional offices. Over 20 employees were transferred out of the Division of Forestry leaving the division with 147 employees and a cap on fulltime employees of 154.

### **Objective 1 – Ensure the competency, consistency and efficiency of new and existing DNR program staff and citizen volunteers through training.**

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- Tactic 1.1:** DMRE provides in-house annual new inspector training for all inspection staff and centers its training of its personnel, and possibly DMP personnel, on the requirements that are determined to be of importance, emphasis, or need by management staff.
- Tactic 1.2:** DMRE Train regional administrative staff as to use of Excel software. Offer field training to Frankfort Administrative Staff and Assessment and Records Section Staff to give them a better understanding of the on ground circumstances leading to the inspector's decision that a violation should be written.
- Tactic 1.3 :** Continue DMRE Office Coordinator Training.
- Tactic 1.4:** Staffs from DMP, DMRE and AML take full advantage of OSM course offerings to increase their technical expertise.
- Tactic 1.5:** DMP provides one on one training with new employees and monthly reviewer roundtable training for all permit reviewers.
- Tactic 1.6:** DMP develops standards for continuing education of supervisory personnel by including GSA classes in performance management and leadership training.
- Tactic 1.7:** DMP provides an on-line library of guidance documents and training modules on technical topics to ensure that permits are issued in compliance with SMCRA requirements and performance standards.
- Tactic 1.8:** By providing continuity of services for the Small Operator Assistance Program (SOAP), increases in effectiveness in serving the small coal mining operator, as well as more efficiently manage program funding, can be realized.
- Tactic 1.9:** Provide joint training for DMRE inspectors and DMP permit reviewers to enhance coordination during permit review, resolution of non-compliances through permitting actions, and field enforcement.
- Tactic 1.10:** Conduct technical, program and leadership training as appropriate for conservation employees, conservation district supervisors, watershed conservancy district supervisors and other citizens of the Commonwealth.
- Tactic 1.11:** Provide ongoing training to all Explosives and Blasting Branch Inspectors to enable them to remain current with any changes occurring in the blasting profession. An online library of policy statements, guidance documents, and reference was created which continues to be further developed and updated for use by the Explosives and Blasting Branch staff.
- Tactic 1.12:** E&B conducts field training on blasting methods and issues for DMRE field staff. EBB inspectors accompany DMRE inspectors when possible on complete inspections and give one-on-one training regarding specific blasting concerns for the permit. EBB inspectors also assist DMRE inspectors regarding blasting complaints. EBB continues to implement this process and strives to make the Surface Mine Inspector/Blasting Inspector relationship a seamless one.



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### **Objective 2 – Improve efficiency and accuracy of DMRE penalty assessments.**

**Tactic 2.1** Convert Proposed Assessment Worksheet to excel format with automated formulas to minimize mathematical errors.

### **Objective 3 – Where feasible, use electronic methods of communication with the DNR regulated community and the public to save the time and expense of mailing.**

**Tactic 3.1:** Encourage the use of fully automated (paperless) bond release requests from the regulated community to be uploaded to the regional office FTP sites.

**Tactic 3.2:** Upgrade the workflow processes for the Bond Release and Forfeiture Section to use Staffware for administrative bond releases due to permitting actions with Staffware cases being started in the Division of Mine Permits at permit issuance; to use Staffware for bond substitutions; and to use Staffware for supplemental assurance releases.

**Tactic 3.3:** Convert the current bond release forms from Word to Access format; include SMIS and GIS interfacing of data required for submission.

**Tactic 3.4:** Develop, implement and install an on-line data DOG management system for electronic permitting and reporting to reduce staff handling time and improve accessibility to permitting and reporting information.

### **Objective 4 – Pursue the feasibility of fee and assessment increases to provide additional funding to departmental programs.**

**Tactic 4.1:** Complete a thorough review of departmental fee structures and, where feasible, institute regulatory changes to increase revenue streams in all divisions, with a focus on a revision of the blasting certification fees and blasting licensing fees

### **Objective 5 – Ensure accountability of DNR offices and programs.**

**Tactic 5.1:** Commissioner's Office staff will perform reviews as budget and staff allow of every DNR office for compliance with Cabinet and Departmental policies related to fixed assets, vehicle reports, cash receipts, timekeeping, cell phone usage and other topics deemed necessary by the Commissioner.

**Tactic 5.2:** Division of Conservation will assure completion of conservation and watershed district audits as required by state law and successfully address all identified corrective measures.

### **Objective 6 – Ensure the efficiency and effectiveness of operations within the Division of Forestry following the 2013 reorganization and realignment.**

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**Tactic 6.1:** Fill all vacant positions to the 154 employee cap limit.

**Tactic 6.2:** Complete the closure of the last district office building in Pineville.

**Tactic 6.3:** Establish remote office space with partners or other DNR divisions where needed for Division of Forestry employees whose work counties are too far away from their assigned regional office.

**Objective 7 –Support the information technology needs of DNR to allow DNR’s programs and offices to gain efficiencies through the use of electronic communications, wireless inspection, digital data collection and storage, electronic workflow, computer modeling, GIS applications and electronic reporting. (DTAS)**

**Tactic 7.1:** Provide improved technology planning and coordination of all Department technology staff in light of the ongoing Infrastructure Consolidation by the Commonwealth Office of Technology.

**Tactic 7.2:** Ensure that DNR agencies’ desktop support and data integrity remains stable once the COT consolidation is complete.

**Tactic 7.3:** Cross train DNR technology staff to support applications for all agencies to avoid interruption of service should a primary support person be unavailable.

**Tactic 7.4:** Continue to improve the Surface Mining Information System for use by the DNR, the regulated community, and the public; develop and implement electronic filing of surface water and ground water data; enter all DMR data that is on paper into SMIS; establish a coordinated protocol with DEP for anticipated entry of DMR data into NetDMR.

**Tactic 7.5:** Train employees on the use of shapefiles which are now required by RAM #158.

**Tactic 7.6:** Provide a comprehensive suite of data retrieval and analysis tools to DMP, encapsulated in a single applications suite that can be attached to any ArcMap project (PRISM Project).

**Performance measure:** The degree to which the PRISM increases accuracy and saves time relative to earlier workflows programs.

**Tactic 7.7:** Identify hardware, software or network needs allowing better electronic communication between the Division of Conservation’s main office, conservation district offices, state and federal agencies, field staff and the general public.

**Tactic 7.8:** Continue development of OMSL Mine Safety and Mapping Capital IT Project (MIST) which will rewrite the existing application and ensure OMSL electronic inspections and licensing data can be uploaded directly to the database.

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**Tactic 7.9:** Ensure that DOF can leverage funding to obtain needed licenses and technology tools available through the EEC OIS.

**Tactic 7.10:** Provide an improved method of GIS coordination, programming, and implementation throughout DNR.

### **Objective 8 – Provide administrative support and guidance to the Department. (DTAS)**

**Tactic 8.1:** Improve the efficiency of personnel action process. Fill all personnel vacancies rapidly to maintain budgeted staffing numbers.

**Tactic 8.2:** Increase the amount of federal funds received through grant writing to support Department objectives when available.

**Tactic 8.3:** Properly support central office vehicle needs through tracking and maintenance.

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### Department for Natural Resources Office of the Commissioner

#2 Hudson Hollow  
Frankfort, Ky. 40601  
Tel. (502)564-6940 Fax. (502)564-5698  
[www.dnr.ky.gov](http://www.dnr.ky.gov)

#### Division of Abandoned Mine Lands

2521 Lawrenceburg Rd.  
Frankfort, Ky. 40601  
Tel. (502)574-2141 Fax. (502)564-6544

#### Division of Forestry

627 Comanche Trail  
Frankfort, Ky. 40601  
Tel. (502)564-4496 Fax. (502)564-6553

#### Office of Mine Safety & Licensing

1025 Capital Center Drive  
Frankfort, Ky. 40601  
Tel. (502)573-0140 Fax. (502)573-0152

#### Office of the Reclamation Guaranty Fund

#2 Hudson Hollow  
Frankfort, Ky. 40601  
Tel. (502)564-6940 Fax. (502)564-5698

#### Division of Mine Reclamation & Enforcement

#2 Hudson Hollow  
Frankfort, Ky. 40601  
Tel. (502)564-2340 Fax. (502)564-5848

#### Division Of Mine Permits

#2 Hudson Hollow  
Frankfort, Ky. 40601  
Tel. (502)564-2320 Fax. (502) 564-6764

#### Division of Technical & Administrative Support

#2 Hudson Hollow  
Frankfort, Ky. 40601  
Tel. (502)564-6940 Fax. (502)564-5698

#### Division of Conservation

375 Versailles Road  
Frankfort, Ky. 40601  
Tel. (502)573-3080 Fax. (502)573-1692

#### Division of Oil & Gas

1025 Capital Center Drive  
Frankfort, Ky. 40601  
Tel. (502)573-0147 Fax. (502)573-1099

